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AN INVESTIGATION OF PRACTICES  
IN FIRST GRADE ADMISSION  
AND PROMOTION

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# AN INVESTIGATION OF PRACTICES IN FIRST GRADE ADMISSION AND PROMOTION

## CHAPTER I THE PROBLEM

### EXTENT OF RETARDATION AND NON-PROMOTION

Numerous investigations have been made on retardation and also on progress of children through the grades. Age-grade studies show graphically by means of age-grade charts the extent of retardation in our public schools. Age-progress studies show the degree to which children in a given school system are progressing at normal rate, rapid rate, and slow rate. The technique of obtaining these data has been so simplified by leaders in administration that facts of retardation and non-promotion in a school system may easily be obtained. The following quotations taken from four surveys made within the past ten years constitute a fair sampling of survey findings with respect to retardation and non-progress of children.

Comparing the three progress groups for the elementary schools less than half of the children arrive at a given grade in normal time. Less than five percent are able to gain a year's time, while practically half are retarded and compelled to repeat one or more grades.<sup>1</sup>

The age-grade distribution suggests that Boise occupies a high place among American cities with reference to the grading of pupils by age. The proportion of retardation is 23.5 percent of the enrollment . . . extending into one, two, three, four, and five year groups.<sup>2</sup>

In most cities it has been found that about one-third of the pupils are retarded. In some communities as many as one-half of the pupils are retarded.<sup>3</sup>

The figures on retardation were collected from reports received from the teachers of over 30,000 children in rural schools. They were collected in September, at the time the children are entering rather than completing the grades in which they are listed. For this reason the children are given the advantage of about one year in the age classification as compared with data collected at the close of the term. It is assumed that children enter school at six years of age and make one grade a year during the elementary schools. These children are classified as making normal progress, those one year under

<sup>1</sup> *Baltimore Survey*, Vol. II, Part III, p. 167, 1920.

<sup>2</sup> *The Boise Survey*, Vol. IX, Chap. VI, pp. 132, 140, 141, 1920.

## 2 *Investigation of First Grade Admission and Promotion*

this age are classified as making rapid progress and those one year over this age as making slow progress. A summary of the data for the State as compared with similar data for Denver given in the recent Denver survey is given below.<sup>3</sup>

Table \*\*\*—Progress in Denver and in Rural Schools

	Denver	Rural Schools of State
Total number children . . . . .	22,285	30,379
Rapid progress . . . . .	Percent 20	Percent 10
Normal . . . . .	47	36
Slow progress . . . . .	33	54

In grades first and second nearly 20 percent of the boys and girls are repeating the grade. This drops to 11 percent in the third grade and still further to 5 percent and less in the seventh and eighth grades. In the rural schools 25 percent of the pupils in the first grade are repeating the grade.<sup>4</sup>

Retardation and non-promotion in our public schools present two difficult but important problems.

1. Failure is said by psychologists to endanger seriously the morale of the individual child:

The stimulus of success is an essential condition of normal development and mental health. Continued failure, on the other hand, is likely to develop an unsocial attitude, the shut-in personality, and to plant seeds perhaps of mental disorder. . . . Many schools have put a premium on failure. And from this continued effort to do work that cannot be done well, pupils are apt to acquire a slovenly attitude and, like the young horse given too heavy a load at first, they acquire the habit of lying down under a difficult task.<sup>5</sup>

2. There is an economic loss in failure to prepare the individual for his best service after leaving school, and a financial loss to the community which comes from the added expense of repeating a grade.

If a child's abilities make it possible for him to acquire only part of the curriculum organized for a particular grade, the economic and financial losses to the community and the moral defeat of the individual should be considered before he is marked with failure. "It is a serious thing for a child to fail to do a year's work in a

<sup>3</sup> *Report of an Inquiry into the Administration of the Colorado School System*, Chap. V, p. 47, 1917.

<sup>4</sup> *Report of the Survey of the Town of Hammonton, N. J.*, Chap. V, p. 59, 1926.

<sup>5</sup> William H. Burnham, *Success and Failure as Conditions of Mental Health*, 1919.

year and to be forced thereby to go over the same ground the second time. If the pupil leaves school at a certain age at the end of the compulsory period he misses the work of as many upper grades as he has had failures during his course.”<sup>6</sup>

Retarded children who continue to attend school, irrespective of the number of their failures, until they have met the standards set in each grade, place a heavy financial burden on the community and challenge the administrator to provide a curriculum to meet their varying abilities and needs. “The actual cost of repetition increases the cost of education to the extent of the actual per capita cost multiplied by the number of children repeating. The actual per capita cost in Colorado varies from \$35 to \$118; if ten children repeat a grade the loss varies from \$350 to \$1,180.”<sup>6</sup>

Whether non-promotion is due to low intelligence, or whether it is the effect of poor teaching of a curriculum to which a child has difficulty in adjusting, the financial and economic loss to the community is of importance. “It has become a matter of information that more than 10 percent of the cost of tuition is for repeated instruction, and that about a fourth of the pupils leave school with not more than a sixth grade education, and that the ranks of the vocationally incompetent are recruited largely from children over-age for their grade.”<sup>7</sup>

The seriousness of the extent of non-promotion in public schools with its effect on the morale of the individual and on the financial loss of the community is significant in all grades. The great weight of non-promotion, however, rests upon the first grade. In one of the most recent studies on school failure the investigator says, “Grade I is the greatest failing grade, being responsible for 30.2 percent of the failure in cities and 24.1 percent of all failures.”<sup>8</sup>

Causes of retardation and non-promotion have been discussed from the interpretation of statistical findings, and from the opinions of teachers, superintendents, and investigators of these problems.

Statistical data have been compiled from different studies by Terman to show the influence of low mental age on over-ageness: “Of Dickson’s first-grade pupils who were eight years or older,

<sup>6</sup> *Report of an Inquiry into the Administration and Support of the Colorado School System*, Chap V, p. 67, 1917.

<sup>7</sup> Terman, Lewis M., *The Intelligence of School Children*, Chap. VIII, p. 111, 1919.

<sup>8</sup> Percival, Walter F., *Study of the Causes and Subjects of School Failure*, 1927.



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68 percent were below 80 I.Q. Of Hubbard's fifth-grade pupils who were thirteen years old or older, 64 percent were below 80 I.Q. Of 50 over-age children tested by Williams in three California cities, 50 percent had an I.Q. below 80 and 32 percent were below 75. In the case of 1,000 unselected children on whom the Stanford Revision was based, 97 were three or more years over-age on the Ayres standard. Of these 78 percent were below 80 I.Q. Conversely, nearly all of those who were below 80 I.Q. were one or more years over-age for the grade in which they were located."<sup>9</sup> The conclusion drawn by the writer was that "the over-age child is usually a dull child."<sup>9</sup>

The causes of non-promotion as listed below are (1) those stated on the authority of investigators<sup>10, 11, 12</sup> who have made careful studies of this problem, and (2) those most often mentioned by teachers and superintendents in response to the questionnaire used in this study.

1. Poor home conditions.
2. Physical defects.
3. Transferring from another school.
4. Retarded mental development.
5. Difficulty with the English language.
6. Lack of application.
7. Irregular attendance.
8. Late entrance.
9. Delinquency.
10. Too high a standard.
11. Lack of flexibility in methods of promotion.
12. Curriculum leading only to a college course.
13. Lack of supervision.
14. Laziness.
15. Unqualified teachers.
16. Too many grades or too many pupils for one teacher and no time for individual work with slow pupils.
17. Short terms.
18. A course of study which does not provide for children who are more interested in things than in books.
19. Variability of children.

<sup>9</sup> Terman, Lewis M., *The Intelligence of School Children*, Chap. VII, p. 1116, 1919.

<sup>10</sup> *Town of Hammonton, N. J., Survey Report*, Chap. V., 1926.

<sup>11</sup> *Report of an Inquiry into the Administration and Support of the Colorado School System*, Chap. V, 1917.

<sup>12</sup> Terman, L. M., *Intelligence of School Children*, Chap. VIII, 1919.

20. Failure to adjust the school work to the needs and capacities of the pupils.
21. Inadequate medical inspection.
22. Inadequate formulation of promotion standards.
23. Inaccurate methods of measuring results.

The scientific studies of Dickson and others on mental age and its relationship to non-promotion and retardation are of utility in attacking this problem. Findings from an investigation of one cause, however, should be supplemented by findings in regard to other probable causes before a program of progress through the grades to secure a minimum of non-promotion is constructed. In current practice first grade promotion usually takes place when the child has acquired the knowledges, skills, and habits which are the standards of this grade. Appropriateness of the requirements for admission to the first grade; the amount and kind and difficulty of the learning needed in order to accomplish first grade goals; concomitant factors which influence the set to or away from learning; the method used to determine the status of the child in the standards set for promotion—all need to be scrutinized for their possible share in retardation and non-promotion.

The purpose of this study is to investigate current practices for first grade admission and promotion of children with particular reference to the following questions:

1. What are the factors determining promotion?
2. How is the status of children in these factors determined?
3. What specific standards are set up as a basis for promotion?
4. To what extent does the current practice of administrators reporting on first grade admission and promotion agree with the findings of research?

To obtain data for this study an analysis was made of the factors which influence promotion and the methods which determine the status of children in these factors. This analysis was put in questionnaire form<sup>13</sup> and sent to administrators of different ranks—superintendents, supervisors, principals of a public school system, and directors of laboratory schools. The findings in this study are based on reports made by 90 superintendents, 94 supervisors, 20 principals of a public school system, and 15 directors of laboratory schools.<sup>14</sup>

<sup>13</sup> See Appendix.

<sup>14</sup> Note Table I, p. 31.

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The populations of the cities from which data were obtained were as follows:

Population	Number of Cities
Under 500 .....	8
500 to 1,000 .....	10
1,000 to 10,000 .....	40
10,000 to 20,000 .....	26
20,000 to 50,000 .....	25
50,000 to 100,000 .....	22
100,000 to 500,000 .....	21
500,000 to 800,000 .....	3

The supervisors selected to give data on the questionnaire were procured from the supervisory directory filed in the office of the director of extramural work at Teachers College, Columbia University, during the summer of 1926. The principals were selected from a public school system which for many years has endeavored to apply principles of education as determined by modern scientific study in a public school situation. Directors of laboratory schools represent seven laboratory schools connected with leading universities, four private experimental schools, and four normal training schools which are not required to conform to a public school system. It therefore seems probable that the promotion procedures analyzed in this study represent the practice of schools and school systems above the average.

## CHAPTER II

### FACTORS DETERMINING ADMISSION TO FIRST GRADE AND PROMOTION FROM FIRST GRADE

#### PROBLEM

1. What are the factors that administrators use to determine (a) the admission of kindergarten and non-kindergarten children to first grade, and (b) the promotion of children from low first to high first grade and from high first to second grade?
2. What is the proportional influence of different factors on promotion as shown (a) in the number of times each factor was checked, (b) in the percent of administrators who used each factor and (c) in the median percent weighting?

#### PROCEDURE

Table I<sup>1</sup> shows the number of superintendents, supervisors, principals and directors of normal training and private experimental schools who checked the questionnaire<sup>2</sup> furnishing the data for this chapter. The difference in the number checking the factors for the entrance of kindergarten children and non-kindergarten children is probably due to one or more of the following reasons: (1) that not all schools have kindergartens; (2) that the standards for the entrance to first grade are often similar for kindergarten and non-kindergarten children; and (3) that there are in these schools no standards for non-kindergarten children except chronological age, which is fixed by law.

Three aspects of these factors are presented in the summary of findings to show the emphasis on different factors in determining admission to and promotion from first grade: (1) the number of times each factor was used expressed as a percent of the number of times all factors were used; (2) the percent of the total number of administrators replying who used each factor; and (3) the median percent weighting given to each factor. Owing

<sup>1</sup> Tables referred to in this study will be found at the end of each chapter.

<sup>2</sup> See Appendix for questionnaire sent to administrators.

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to the large number of zero scores given to each factor except chronological age, the zero scores were neglected in calculating medians.

To the factors listed on the questionnaire which might influence the admission of kindergarten and non-kindergarten children to first grade, one superintendent, two supervisors and one director of a laboratory school added social age; one supervisor and one director of a laboratory school added parental judgment; different supervisors added attendance, language, crowded conditions, two semesters in kindergarten, and first grade entrance test. The fact that so few additional items were supplied by the respondents would seem to indicate a fairly complete analysis in the questionnaire as formulated.

### PART I: SUMMARY OF FINDINGS

#### I. FACTORS USED FOR THE ADMISSION OF CHILDREN TO FIRST GRADE

##### *A. Number of Times Each Factor Was Checked for Some Weighting between Zero and 100 Percent*

###### 1. For admission of kindergarten children to first grade:

a. The superintendents' group checked all factors 111 times. Forty-one superintendents checked chronological age 41 times, or 37.2 percent of the total 111 checks; general ability to do first grade work 22 times, or 20 percent; physical maturity 16 times, or 14.5 percent; mental age 14 times, or 12.7 percent; general health 7 times, or 6.3 percent. Scattering items such as health habits, general conduct, emotional stability, and social age were checked in all 11 times, or 9.9 percent.

b. The supervisors' group checked all factors 223 times. Seventy-seven supervisors checked chronological age 64 times, or 28.7 percent of the total 223 checks; general ability to do first grade work 36 times, or 16.1 per cent; mental age 34 times, or 15.2 percent; general health 29 times, or 13.0 percent; and physical maturity 19 times, or 8.5 percent. Emotional stability, health habits, general conduct, social age, two semesters in kindergarten, attendance, parents' judgment, language requirements, crowded conditions, and entrance class test, were checked in all 41 times, or 18.3 percent.

c. The principals' group checked all factors 57 times. Nineteen principals checked chronological age 17 times, or 29.8 percent

of the total 57 checks; general ability 14 times, or 24.5 percent; mental age 8 times, or 14.0 percent; general health 7 times, or 12.2 percent; and physical maturity 5 times, or 8.7 percent. Emotional stability, health habits, and general conduct were checked in all 6 times, or 10.4 percent.

d. The 12 directors of laboratory schools checked all factors 48 times. They checked chronological age 9 times, or 18.7 percent of the total 48 checks; mental age 10 times, or 20.8 percent; physical maturity 7 times, or 14.5 percent; general health, and general ability to do first grade work 5 times each, or 10.4 percent. Emotional stability, health habits, general conduct, social age, and parents' judgment were checked in all 12 times or 25 percent.

The number of times the administrators of public schools checked chronological age as a factor for the admission of kindergarten children to first grade far exceed the number of times they checked any other factor.

The factors which public school administrators rank as the first five in importance to determine the admission of children to first grade are chronological age, general ability to do first grade work, physical maturity, mental age, and general health.

All groups of administrators except the directors of laboratory schools checked chronological age more times than any other factor. The directors of laboratory schools, however, checked mental age more times. They also used factors other than those within the five highest ranks of public school administrators more often than did the administrators of public schools.

2. For admission of non-kindergarten children to first grade:

a. All the administrators both for public schools and for laboratory schools checked chronological age more times than any other factor for the admission of non-kindergarten children to first grade. All administrators used chronological age more times for the admission of non-kindergarten children than for the admission of kindergarten children. Out of the 439 times that all factors were checked for kindergarten children, chronological age was checked 131 times, or 29.3 percent; out of the 254 times that all factors were checked for non-kindergarten children, chronological age was checked 143 times, or 36.3 percent.

b. All administrators checked mental age less often as a factor for the admission of non-kindergarten children than for the admission of kindergarten children. Out of the 439 times that

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all factors were checked for kindergarten children, mental age was checked 66 times, or 15.0 percent; out of the 254 times that all factors were checked for non-kindergarten children, mental age was checked 22 times, or 8.8 percent.

c. With few exceptions all other factors listed on the questionnaire were checked less often as factors for the admission of non-kindergarten children than for the admission of kindergarten children.

### *B. Percent of Administrators Who Used Each Standard for Some Weighting*

#### 1. For admission of kindergarten children to first grade:

a. Chronological age is used by 41, or 100 percent, of the superintendents as a factor for the admission of children from kindergarten to first grade; general ability to do first grade work by 53.6 percent; physical maturity by 39.0 percent; mental age by 17.0 percent. Emotional stability, health habits, and general conduct each are used by fewer than 10 percent of the superintendents who checked the questionnaire.

b. Chronological age is used by 64, or 83.1 percent, of the 77 supervisors reporting; ability to do first grade work by 46.7 percent; mental age by 44.1 percent; general health by 37.6 percent; physical maturity by 24.6 percent. Emotional stability, health habits, and general conduct each are used by fewer than 20 percent of the supervisors who checked the questionnaire.

c. Chronological age is used by 17, or 89.4 percent, of the 19 principals who checked the questionnaire as a factor for the admission of children to first grade; general ability to do first grade work by 73.6 percent; mental age by 42.1 percent and general health by 36.8 percent. Emotional stability, health habits, and general conduct each are used by fewer than 16 percent of the principals who checked the questionnaire.

d. Chronological age is used by 9, or 75 percent, of the 12 directors of laboratory schools for the admission of kindergarten children to first grade; mental age by 10, or 83.3 percent; physical maturity by 58.3 percent; general ability to do first grade work by 41.7 percent; general health by 41.6 percent. Emotional stability, health habits, and general conduct are used by 33.3 percent, 33.3 percent, and 16.6 percent respectively.

#### 2. For admission of non-kindergarten children to first grade:

a. Chronological age is used by more public school administrators for the admission of non-kindergarten children than for the admission of kindergarten children. All administrators use mental age fewer times as a factor for the admission of non-kindergarten children to first grade than for the admission of kindergarten children.

*C. Median Percent Weightings<sup>3</sup> of Each Factor Used in Determining Admission to First Grade*

1. For admission of kindergarten children to first grade:

a. Chronological age was given a median weighting of 86.1 percent by 41 superintendents; mental age a median weighting of 27.6 percent by 14 superintendents; and general ability to do first grade work a median weighting of 27.5 per cent by 21 superintendents. Each of the other factors had a median weighting below 20 percent.

b. Chronological age was given a median weighting of 90.5 percent by 64 supervisors; mental age a median weighting of 30 percent by 34 supervisors; general ability to do first grade work a median weighting of 20 percent by 36 supervisors. Each of the other factors for admission to first grade had a median weighting below 20 percent.

c. Chronological age was given a median weighting of 56.2 percent by 17 principals; general ability to do first grade work was given a median weighting of 50 percent by 14 principals; and mental age was given a median weighting of 23.3 percent by 8 principals.

d. Mental age was given a median weighting of 36.6 percent by 10 directors of laboratory schools; chronological age a median weighting of 35 percent by 9 directors of laboratory schools; and general ability to do first grade work was given a median weighting of 25 percent by 5 directors of laboratory schools.

e. General health was given a median weighting of 22.5 percent by 5 directors of laboratory schools; physical maturity a median weighting of 21.2 percent by 7 directors of laboratory schools; and emotional stability a median weighting of 20 percent by 4 directors of laboratory schools.

The median weighting for chronological age given by principals

<sup>3</sup> Owing to the large number of median scores given to each factor except chronological age the zero checks were discarded in calculating medians.



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is lower than the median weighting given by superintendents or supervisors. The median weighting for chronological age given by directors of laboratory schools is lower than the median weightings of superintendents, supervisors, or principals; and the median weighting given to mental age by directors of laboratory schools is higher than the weightings given by public school administrators. More weight is given to the three health factors by those directors of laboratory schools who checked the questionnaire than by those administrators of public schools who checked the questionnaire.

The median weighting of different factors shows significant differences among administrators with reference to the importance of factors for admission to first grade. The public school administrators reported a median weighting of 77.4 percent given to chronological age while the directors of laboratory schools reported a median weighting of 35 percent given to chronological age. The three factors receiving the highest median weighting in all groups were chronological age, mental age, and general ability to do first grade work.

### 2. For admission of non-kindergarten children to first grade:

a. Chronological age was given a median weighting of 100 percent by 137 administrators of public schools, and 90 percent by 6 directors of laboratory schools, for the admission of non-kindergarten children to first grade. Mental age was given the second highest median weighting by administrators in public schools and laboratory schools. General ability to do first grade work was given the third highest median weighting by public school administrators, and general health was given the third highest weighting by directors of laboratory schools.

### *D. Other Factors Influencing Admission of Children to First Grade*

1. Out of 219 persons checking the questionnaire, 65, or 29.6 percent, reported the influence of room space on the admission of children to first grade. Of these 65, 19, or 29.2 percent, reported room space to effect an increase in the number promoted; 5, or 7.6 percent, reported it as causing a decrease in the number promoted; and 41, or 63.0 percent, reported limited room space to be no factor in the admission of kindergarten children to first grade.

2. Out of 219 persons checking the questionnaire, 120, or 54.7

percent, reported the extent of the influence of limited room space. Of these, 14, or 11.6 percent, reported the influence to be "much"; 30, or 25 percent, reported the influence to be "little"; 63, or 52.5 percent, reported the influence to be "none"; and 13, or 10.5 percent, reported the influence to be "little or none."

3. A limit to the number of years that a child may remain in kindergarten in some school systems makes the entrance to first grade automatic. Out of 210 persons who checked the questionnaire, 77, or 35.1 percent, reported a limit to the number of years that a child may remain in kindergarten. Of these 77, 46, or 59.7 percent, (which is 21 percent of the total number who checked the questionnaire) reported a limit of two years in the kindergarten. The range of limits for a child's kindergarten instruction was from one half-year to three years.

## II. FACTORS USED TO DETERMINE PROMOTION FROM LOW FIRST GRADE TO HIGH FIRST GRADE AND FROM HIGH FIRST GRADE TO SECOND GRADE

Out of 219 questionnaires <sup>4</sup> returned, 106 were checked to show the factors that determined promotion from low first to high first, and 151 were checked to show the factors that determined promotion from high first to second grade. The 106 persons included 33 superintendents, 57 supervisors, 9 principals and 7 directors of laboratory schools, while the 151 persons included 59 superintendents, 66 supervisors, 16 principals, and 10 directors of laboratory schools.

For the purpose of locating the emphasis that administrators give to types of standards for promotion, a grouping of different factors has been made. In this study Group A includes reading, language, number, spelling, and writing—herein called the traditional subjects. Group B includes nature study, art, and music—herein called special subjects. Group C includes physical maturity, emotional stability, general health, and health habits—herein called factors relating to health and physical growth. Group D includes attendance, effort and general conduct—herein called administrative factors.

### *A. Number of Times a Factor or Group of Factors Was Checked for Some Weighting between Zero and 100 Percent*

#### 1. For promotion from low first to high first grade:

<sup>4</sup> See Tables at end of chapter.

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The administrators of public schools checked all subjects 486 times. They checked the traditional subjects (Group A) 222 times, or 45.6 percent of the total 486 checks, and the special subjects (Group B) 27 times, or 5.5 percent; the factors relating to health and physical growth (Group C), 61 times, or 12.5 percent; the administrative factors (Group D), 61 times, or 12.5 percent. Chronological age was checked 29 times, or 5.9 percent; mental age 39 times, or 8.0 percent. Social adjustments was checked 47 times, or 9.6 percent; reading, 97 times, or 19.9 percent.

The comparative weight or influence of different factors or groups of factors in promotion procedure, made evident by the number of times each was checked, would indicate far heavier emphasis on the traditional subjects than on the special subjects, and double the consideration given to reading than to any activity that brings about social adjustment. The directors of laboratory schools, in the number of times they checked different factors, indicated an emphasis on practically the same factors or group of factors as the administrators of public schools.

### 2. For promotion from high first to second grade:

The administrators of public schools placed slightly more emphasis on the traditional subjects, and less on the special subjects, for promotion from high first to second grade, than they did for promotion from low first to high first. More emphasis is given in this grade to the administrative factors, than to the factors relating to physical health and growth. The emphasis given to other factors which influence promotion from high first to second grade is approximately the same as the emphasis given to the factors for promotion from low first to high first. In the laboratory schools for promotion from high first to second grade the influence, indicated by number of times the different factors were checked, showed emphasis on the same factors as those used for promotion from low first to high first.

## *B. Percent of Administrators Who Used Each Factor*

### 1. For promotion from low first to high first grade:

The traditional subjects (Group A) are used by 44.8 percent of the 99 administrators of public schools; the special subjects (Group B) by 9.1 percent. The factors relating to health and physical growth (Group C) are used by 15.3 percent of the administrators of public schools; the administrative factors (Group

D) by 20.4 percent. Chronological age is used by 29.1 percent of the administrators of public schools; mental age by 39.2 percent. Social adjustments is a factor used by 47.4 percent of the public school administrators and reading by 97.9 percent.

It is evident that whereas many public school administrators consider the traditional subjects important for promotion, comparatively few consider the special subjects of any importance for this purpose. Reading is accepted by practically all administrators as a factor of importance for promotion in the first grade, but social adjustments are considered to be crucial by approximately only half this number. Attention is given to factors relating to physical health and growth (Group C) by some administrators, but more administrators use the administrative factors (Group D).

2. For promotion from high first to second grade:

More administrators use the traditional subjects and fewer the special subjects for promotion from high first to second grade, than for promotion from low first to high first. More administrators also use reading and fewer use social adjustments for promotion from high first to second grade, than for promotion from low first to high first.

*C. Median Percent Weighting for Each Factor*

1. For promotion from low first to high first grade:

In the public schools for the promotion of children from low first to high first grade, a median weighting of 28.9 percent is given to the traditional subjects of Group A, and of 7.5 percent to the special subjects of Group B. A median weighting of 13.8 percent is given to the factors relating to health and physical growth in Group C, and of 11.4 percent to the administrative factors of Group D. A median weighting of 11.5 percent is given to chronological age, and of 14.9 percent to mental age. A median weighting of 15.5 percent is given to social adjustments, and 62.5 percent is given to reading.

It is important to note that in the promotion of children from low first to high first grade, administrators of public schools give the traditional subjects a weighting which is four times that given to the special subjects; likewise, a median weighting is given to reading which is four times the weighting given to social adjustments. Mental age and chronological age are given about the same weighting.

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In the laboratory schools for the promotion of children from low first to high first grade, a median weighting of 18.3 percent is given to the traditional subjects (Group A); and no weighting to the special subjects (Group B). A median weighting of 7.3 percent is given to the factors relating to health and physical growth (Group C); and 15.8 percent is given to the administrative factors (Group D). A median weighting of 15 percent is given to chronological age; and 20 percent to mental age. A median weighting of 58.3 percent is given to reading; and 15.0 percent to social adjustment. The heaviest weighting in the factors influencing promotion from low first to high first is on the traditional subjects (Group A) and reading; but this weighting is less than that given to these subjects by administrators in public schools.

### 2. For promotion from high first to second grade:

In public schools and in laboratory schools there is practically no significant difference between the weightings given to factors or groups of factors for the promotion of children from low first to high first grade, and from high first to second grade.

### *D. The Significance of Reading as a Factor Influencing Promotion*

The question, "Would a child with a satisfactory rating in reading be denied promotion because of a low rating in any other factor?" was answered by 166 out of 219 administrators. Of these 45 or 27.1 percent replied that even though children had a satisfactory reading score they *would be* denied promotion if they had a low rating in other factors; 119 or 71.6 percent replied that a child with a satisfactory rating in reading *would not* be denied promotion even though there was a low rating in other factors. Two or 1.2 percent replied, "Yes and no."

### *E. Other Factors Influencing Promotion to Second Grade*

Of the 219 persons checking the questionnaire, 48 replied to the question relating to the influence of limited room space on promotion. Of the 48, 56.2 percent reported that limited room space increased the number of children promoted; 4, or 8.3 percent, reported that limited room space decreased the number promoted; and 17, or 35.2 percent, reported that room space was not a factor influencing promotion. One hundred and ten persons, as noted in the next paragraph, reported the extent of such influence as "none."

Of the 219 administrators 164 replied to the question relating to the extent of the influence of limited room space. Nine, or 5.4 percent of the 164 persons replying, reported "much"; 43, or 26.2 percent, reported "little"; 110, or 67.0 percent, reported "none"; and 2, or 1.2 percent, reported "little or none." It appears that room conditions have a tendency to increase promotion more than to decrease it, but the extent of influence is more likely to be "little" than "much."

A legal limit to the number of years a child may remain in a grade of course produces automatic promotion.

Of the 167 administrators replying to the questionnaire regarding the limit to the number of years a child may remain in first grade, 81, or 48.5 percent, reported a limit of 2 years; 11, or 6.5 percent, reported 3 years; 5, or 2.9 percent reported 1 year; 59 or 35.3 percent, reported no limit; and 11, or 6.5 percent, gave some indefinite age limit rather than a time limit.

### III. PERSONS DETERMINING STANDARDS OF PROMOTION AND THE FINAL PROMOTION OF CHILDREN

#### *A. Persons Determining Standards of Promotion*

There is no agreement among different administrators replying to the questionnaire as to who should assume the responsibility of determining standards for promotion. The person ranking *one* in importance in determining standards was checked by 113 administrators. Among these 113, superintendents were checked 42 times, or 37.1 percent; supervisors 33 times, or 29.1 percent; teachers 24 times, or 21.2 percent; principals 8 times, or 7.0 percent; assistant superintendents 5 times, or 4.4 percent; the state once, or .8 percent.

#### *B. Persons Determining the Final Promotion of Children*

Out of 161 responses as to what person finally determines the promotion of children, the teacher was checked 134 times, or 83.2 percent of the total; the principal was checked 18 times, or 11.1 percent; the superintendent 6 times, or 3.7 percent; and the supervisor 3 times, or 1.8 percent.

It appears from these data that while the superintendent, supervisor, or principal is of greater authority in determining the standards for promotion, the responsibility for estimating the

child's status relative to these standards rests chiefly with the teacher.

## PART II: EVALUATION AND DISCUSSION OF FINDINGS

The results shown in this study do not represent the individual opinion of any one administrator reporting, or an agreement of opinions among them; but rather an aggregate of opinion which is significant only as specifying the most frequently accepted practice in this group. The extremes of individual opinion range from zero percent to 100 percent in the weighting given to the three most frequently used factors for the admission of kindergarten children to first grade—chronological age, mental age, and general ability to do first grade work.

Such value as this picture may have is in showing the factors which a group of administrators select as an indication of (1) a child's probable ability to accomplish what may be demanded of him in the next grade; (2) the emphasis given to the factors or group of factors influencing promotion.

What is allowed, however, in the current practice of these administrators should be challenged as to its soundness to find if it agrees with (1) what the findings of scientific research recently directed to this problem tend to indicate; (2) curriculum objectives.

### I. WHAT IS ALLOWED IN CURRENT PRACTICE

#### *A. For the Admission of Children to First Grade*

The current practice of 204 administrators who checked the questionnaire for the factors which determine the admission of kindergarten and non-kindergarten children is to make chronological age the decisive factor for the admission of children to first grade in the public schools. Mental age received more weight than any other factor for the admission of kindergarten children, and chronological age for the admission of non-kindergarten children to first grade, in the laboratory schools. These two factors, together with general ability to do first grade work, lead in the consideration given by both public school and laboratory school administrators for the admission of children to first grade. Other factors—general health, physical maturity, emotional stability, health habits, and general conduct—range in their median

weighting for those checking these factors from 6.0 percent to 16.6 percent in the public schools and from 10 percent to 22.5 percent in the laboratory schools.

*B. For Promotion from First Grade to Second Grade*

The current practice of 106 administrators who checked the factors to determine promotion from low first to high first, and of the 151 who checked the factors to determine promotion from high first to second grade, indicates that the decisive factor in promotion is reading, and also that decided emphasis is placed on the traditional subjects, with but little or none upon the special subjects—art, music, and nature study. Mental age is held to be of more importance than chronological age. The physiological factors—physical maturity, emotional stability, general health, and health habits—are of but slightly more importance than the administrative factors—attendance, effort, and general conduct.

The evidence that reading is the decisive factor is further sustained in the answers of 166 administrators to the question, "Would a child with a satisfactory rating in reading be denied promotion because of a low rating in any other factor?" Of these, 119, or 71.6 percent, replied that a child with a satisfactory rating in reading would not be denied promotion even though he had a low rating in other factors; 2, or 1.2 percent, replied "Yes and no"; 45, or 27.1 percent, replied that he would be denied promotion.

II. WHAT IS INDICATED FROM THE FINDINGS OF RESEARCH STUDIES

The following summaries of and quotations from studies on first grade retardation, promotion, and classification indicate the findings and implications of students of research on the factors which influence admission to and promotion from the first grade.

*Study 1.*

Dr. Arthur<sup>5</sup> adduces evidence to show (1) that teaching efforts in phonetic work and reading comprehension for pupils with mental age of less than  $5\frac{1}{2}$  years are wasted; (2) that a mental age of 6 or  $6\frac{1}{2}$  years is in general necessary for standard first grade achievement in this school system; (3) that with a mental age of  $6\frac{1}{2}$  to 7 years the returns on the teaching work in reading were

<sup>5</sup> Arthur, Grace, "A Quantitative Study of the Results of Grouping First Grade Children According to Mental Age," *Jour. Educ. Research*, Vol. XII, No. 3, Oct., 1925.



materially increased. Six and one-half to 7 years would seem then to be the optimum mental age for beginning reading instruction where comprehension of printed matter is the object in view. Beyond this we come to a point of diminishing returns. Further increase in mental age gives little increase in efficiency for the beginning of reading. Achievement in each phase of reading tested increases with each half year of mental age. Success in reading comprehension is more dependent on mental age than is success in either of the other two phases of reading ability.

"Whether the class is strong or weak, bright or dull, closely grouped as to mental age, or distributed over a wide range, the teacher without information as to mental age of her pupils adapts her teaching to the ability of the majority. The weaker members of the group are the best taught.

"The pupils above the average of the class in ability . . . are practically certain to accomplish less in proportion to their ability than any other members of the class."

#### *Study 2.*

It is shown in Zornow & Pechstein's report <sup>6</sup> that children with a chronological age of 6 are not always ready to do first grade work.

1. Three years previous to 1920 an average of 20 percent of the children failed in first grade.

2. Out of 55 failures tested in 1A and 1B, 49 had a mental age of less than 6 years and 37 of less than 5½ years.

3. All children who have failed in first grade were among those of low mental age and low intelligence quotient. Those of 6 years mental age and normal intelligence quotient have been able to do the work of Grade I.

4. Since fully one-half of the children in the group who were chronologically 6 years old, were less than 5½ years of age mentally, it has been found desirable to group these children in pre-primary classes.

5. A prediction based on the intelligence quotient will obviate non-promotion. "Chronological age is still permitted to be the most important factor in determining school placement, though in reality it has scarcely more to do with the character of school work than the size of the shoe he is wearing."

<sup>6</sup> Zornow and Pechstein, "An Experiment in the Classification of First Grade Children Through Use of Mental Tests." *Elem. School Jour.*, Vol. XXIII, No. 2, p. 136, Oct. 1922.

*Study 3.*

The importance of mental age to determine first grade readiness is pointed out in Dickson's study. Terman<sup>7</sup> summarizes Dickson's Study of 1,000 first grade children thus: "Below the mental age of 6 years the child is not fully ready to do first grade work. Below a mental age of 5½ years the chances that standard first grade work will be done are practically negligible. Dickson finds 38 percent below the mental age of 6 years and 27 percent below 5½ years."

*Study 4.*

The lack of precision of chronological age to predict reading ability is reported by Theisen<sup>8</sup> as follows: "Chronological age at any stage of school life is less indicative of probable success than mental age or mental maturity. The six and seven year old first grade pupils in St. Louis read better orally than the eight and nine year olds.

"It is not surprising that our results showed no correlation between score on the Haggerty test and chronological age. For 210 first grade pupils and 190 second grade pupils selected at random, the correlations between age and scores were zero except one correlation of 0.13 between Test 1 and age in the second grade. These [latter] figures are too small to be of significance. . . .

"If chronological age were one of the strong factors in providing results in primary reading we should expect to find a decided positive correlation between it and reading performance. Such a condition would mean in general that the older the child in a given grade, the better his reading."

*Study 5.*

Again the lack of significance of chronological age for determining reading readiness is indicated in Brooks' study.<sup>9</sup> The effect of chronological age within a grade on reading achievement in the data of Brooks' study using the partial correlation technique and eliminating or rendering constant certain measured factors was found to be as follows:

"If mental age is partialled out or held constant, reading ability

<sup>7</sup> Terman, L. M. *Intelligence of School Children*, Chap. IV, p. 47, 1919.

<sup>8</sup> Theisen, W. W. "Factors Affecting Results in Primary Reading," in *Twentieth Year Book, National Society for the Study of Education, Part II*, 1921.

<sup>9</sup> Brooks, Fowler. "Chronological Age as a Factor in Reading Achievement," *School and Society*, Vol. 20, No. 522, p. 826. December 27, 1924.

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and chronological age have a relationship average—0.13. If chronological age is held constant, reading achievement and mental age have a positive relationship averaging .595.

"If then we consider pupils in school studying reading our data lend support to the view that chronological age within a grade is in itself of little significance for reading achievement, but that mental age is of considerable importance."

### *Study 6.*

The melioration resulting from considering emotional and physical traits in promotion standards is made evident in Arthur's study<sup>10</sup> which was an investigation of reorganized classes in accordance with the various quantitative mental abilities of the children and with consideration given to physical and emotional handicaps.

1. Children were classified and given a curriculum proportioned to their quantitative mental ability.

2. Children who had the mental ability to do first grade work but who did not succeed were sent to a primary ungraded room and watched for physical and emotional disturbances. Emotional traits varied from the "negative self feeling" to the active hatred of school and all its works. One sort of child was unhappy and tearful; another type was too full of energy to be anything but bored by the mild interests of the schoolroom.

3. In the primary ungraded room procedures employed to rectify these emotional traits resulted in:

- a. Change in attitude toward school as a whole.

- b. Change in attitude toward work.

- c. Interests utilized on the level of capacity.

4. Character and moral values reported as resulting from reorganization of classes:

- a. Slow children spared habit of failing.

- b. Bright children saved from habit of expecting success without effort.

- c. Driving force of school became hope instead of fear.

### *Study 7.*

Data are offered in Baldwin's study<sup>11</sup> on the maturities of children in order to examine:

<sup>10</sup> Arthur, Grace. "An Application of Intelligence Tests to the Problem of School Retardation," *School and Society*. November 22, 1919.

<sup>11</sup> Baldwin, Bird T., in *Twenty-third Yearbook, National Society for the Study of Education, Part I, 1924.*

1. The extent to which measures of physical traits and of several types of maturity may be practically useful in diagnosing the ability of children to achieve.

2. The degree to which these traits should be taken into account in classification and promotion. In the interpretation of his data Baldwin says:

"The findings of the X-ray of the wrist bones is indicative of general anatomical, physiological, or physical maturity, or 'physical fitness' or maturity in general. There is a high correlation of the development of carpal bones with growth in stature and other criteria of maturity.

"Physiological age based on height and general growth, development of carpal bones, should be given a heavy weight in classification and promotion."

On the other hand Gates,<sup>12</sup> making similar measurements, finds:

No physical measure gives a high correlation . . . with either mental age or educational achievement. Between mental age and educational achievement is a correlation .595.

No physical trait is an adequate index of such types of maturity as mental, scholastic, social, emotional or general maturity. Classification of pupils alike in general physical status will not result in a satisfactory classification on any other basis.

Maturities are not everywhere one and the same. Growth is specialized and has many phases. Growth is not everywhere uniform and single, but varied and in different degrees independent.

Mental age, estimated physical fitness, and mental maturity, when all are combined, have a correlation with achievement of 0.67—the highest *r* secured except those which included the teacher's estimate of physical maturity.

Physical measures are to be desired for appraising growth, regulating diet, etc., but not for classifying children intellectually, scholastically, socially, or emotionally.

### *Study 8.*

The Federal Department of Education<sup>18</sup> in Leaflet 23 says:

"The summary of this report on children's readiness for reading is a tabulation of returns representing opinions of teachers teaching under varying conditions in many sections of the country.

1. "To the question 'Do you feel that you are expected to teach some children to read before they are ready?' 506 teachers, or 90

<sup>12</sup> Gates, Arthur I., "The Nature and Educational Significance of Physical Status and of Mental, Physiological, Social, and Emotional Maturity," *Jour. Educational Psychology*, Vol. XV., Sept., 1924.

<sup>18</sup> *Pupils' Readiness for Reading Instruction Upon Entrance to School*, U. S. Bureau of Education, Kindergarten Leaflet No. 23.

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percent, answered yes; 54, or 9+ percent, answered no. The reply to this question would seem to indicate a vital need for investigation of the present method of attempting to give instruction in reading to all first grade pupils upon entrance to school.

2. "Total number of children not ready to read in September 1925, 4,425, or 20 percent.

"One-fifth of first grade pupils not ready to read in the opinion of the teacher presents a practical problem for administrators to study and attempt to solve.

3. "How many of them had kindergarten training? 2,528 or 52 percent. The question requested did not obtain data concerning pupils who were ready for reading instruction. These figures seem to indicate, however, that kindergarten training as such is not sufficient to prepare the child for reading instruction. This may be due to the fact that there is at present in the majority of school systems no intelligent method of promoting from kindergarten to first grade and that the data received did not give the length of time children were in the kindergarten.

4. "How many were there in each of the following age groups?

### Chronological

Age . . .	5-5½ yrs.	5½-6 yrs.	6-6½ yrs.	6½-7 yrs.	7-10 yrs.
Number at each age.	362	1278	1872	757	156
Percent at each age.	8	28	42	17	5

"Data were not obtained on ages of all the first grade pupils; consequently these ages cannot be interpreted in comparison with the successful pupils. It is safe, however, to say that chronological age is not the decisive factor in reading readiness. In actual practice this is frequently the factor that determines the attempt to give the pupil reading instruction.

5. "The high rank given to 'lack of interest' and 'lack of experience' as evidence that the pupils were not ready to be taught reading, should lead to a careful investigation of methods used to prepare pupils for reading in the early stages of reading instruction."

### *Summary*

The findings of research as hereinbefore reviewed thus indicate:

1. The mental age factor is the best single index of a child's readiness to do first grade work.

2. Failure in first grade is due largely to the low mental age and low intelligence quotient of children.

3. The intelligence quotient as a basis of prediction of child progress will practically eliminate non-promotion.

4. A child with a mental age of less than 6 years is not fully ready to do first grade work.

5. Chronological age at any stage of school life is less indicative of probable success than mental age or mental maturity.

6. Chronological age within a grade is in itself of little significance for reading achievement; but mental age is of considerable importance.

7. According to one investigator physiological age is directly correlated with stages of mental maturation. The physiologically more mature children, according to this investigator, have different attitudes, different types of emotions, different interests from those of the children physically younger though of the same chronological age. Physiological age based on height and general growth and development of carpal bones, in the judgment of this investigator, should be given a heavy weight in classification and promotion.

8. From the findings of another investigator: "No physical measures give a high correlation with either mental age or educational achievement and no physical trait is an adequate index of such desiderata as mental, scholastic, social, emotional, or general maturity."

It thus appears that students of research in the light of their present findings would recommend: (1) that mental age is the best single factor to determine a child's readiness to do first grade work; (2) that the intelligence quotient is the best basis of prediction of child progress; (3) that a consideration of the child's physiological age is found helpful (a) by one investigator for classification and promotion, (b) by another only for appraising growth and regulating diet; (4) that the recognition of physical and emotional factors in building up attitudes toward learning is highly desirable.

The foregoing conclusions and advice in regard to current practice are (1) chronological age is considered less indicative of probable success than mental age, and is held in itself to be of little significance to prognosticate readiness for reading; (2) one-fifth of the pupils at present in first grade are considered as prob-

ably not ready for reading, although that was found to be preponderantly the most utilized factor.

### III. WHAT IS SUGGESTED FROM PRINCIPLES GUIDING CURRICULUM MAKING

The factors which influence the admission of children to and their promotion from first grade will be determined to some extent by objectives and principles guiding curriculum making.

There is a tendency in one group of educators who are making curricula to have organized subject matter as the point of departure. The statements of objectives emphasize preparation for adult life, and tend to have the learner acquire (as far as it is biologically possible) a unit of work that is outlined in the curriculum for one grade in order to be fitted to a unit of work that is outlined in the curriculum for the next grade.

The content of the traditional curriculum of this type was largely the three R's. "Learning was thought of as the ability to give back upon demand certain phrases and formulas which had been acquired without adequate understanding of their meaning and content."<sup>14</sup> Chronological age was the sign of the child's readiness to partake of the information which educators planned for him to know in the first grade. Since there was no scientific basis of grade placement of content in the organization of this type of a curriculum there was a deadly uniformity in requirements and a great waste (1) for children incapable of acquiring the knowledge and skills apportioned to a given grade; (2) for children with superior ability capable of doing more.

The more progressive advocates of this departure for curriculum making in the light of modern psychology, philosophy, and scientific study have brought about important changes in this type of curriculum. New subjects have been added, grade placement of material is being determined by more scientific methods, and learning is being considered as "any change in the control of conduct which permanently modifies the individual's mode of reacting upon his environment."<sup>15</sup> Promotion as determined by these objectives requires children to meet standards which administrators

<sup>14</sup> "Curriculum Making," *Twenty-sixth Year Book, National Society for the Study of Education*, Parts I and II, 1927.

<sup>15</sup> "Curriculum Making," *Twenty-sixth Year Book, National Society for the Study of Education*, 1927.

have set up. These standards are based on the curriculum material which the findings of scientific study indicate a particular group is capable of mastering.

The tendency of the other group of educators is to have as its point of departure the needs, interests, and abilities of the learner; and as its objective "the dynamic growth of the child himself."<sup>14</sup> Herein an attempt is being made to discover the social needs and interests of the learner at his own level; provide the experiences that are stimulated by his own problems; and give opportunity for such expression as will produce growth and lead readily to the next step in his development. Among these educators there is found an attempt to secure a complete inventory of the child's emotional, physical, social, chronological and mental status. Records of the child's progress are demanded which show (1) to what extent the activities in which the child engaged brought about growth; that is, improvement in his emotional control, physical condition, and ability to adjust socially; (2) what knowledges, appreciations, skills, and habits brought about these changes; (3) what methods of learning have been most efficient in acquiring these knowledges, appreciations, skills, and habits.

In a school so administered the child would progress according to what he was capable of accomplishing; and the records of his achievements would assist succeeding teachers to ascertain how far he had gone on his educational journey and, in the light of the data recorded, at what pace he should be expected to continue.

Whatever the course of study, the factors influencing promotion or progress from one unit of work to another must necessarily be based on the curriculum achievements of the preceding unit of work. Whether the curriculum demands a set requirement in one unit of work before proceeding to the next, or an inventory of the child's physical, social, mental, and emotional status and educational or behavioristic achievement for the guidance of the teacher's next step, the curriculum of the first grade must evolve from the curriculum of the kindergarten.

In addition to chronological age as used in current practice, and to mental age as enjoined by research results, thoroughgoing evaluation of curriculum achievements should be made. Promotion from kindergarten to first grade on a basis of chronological age indicates a conformity to the demands of the traditional curricula of the kindergarten and the first grade which isolated these



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two units of work. A study of current curricula<sup>16</sup> in the kindergarten and the first grade shows a unification of these two units and an enrichment of content.

When the kindergarten was considered a receiving station for children until they were old enough to go to school, chronological age might have been a more adequate standard for admittance to first grade. But the kindergarten is no longer considered an adjunct to the elementary school either economically or educationally, but an integral part of the school organization. "Pre-primary, primary, elementary, junior high school, senior high school, and junior college—all are aiming at the same ultimate goals. Some are nearer the beginning of man's educational journey; some are nearer its consummation. All the parts make up one journey. It should be direct, consistent, straight, unconfused."<sup>17</sup>

Curriculum factors which have a bearing on the physical, social, and intellectual development of the child should be considered in the promotion of kindergarten children to first grade in the same way that these factors are considered in other grades. Such consideration would tend to unify kindergarten and first grade practice.

Since chronological age is in itself of little significance for reading achievement, and since curriculum achievement in the kindergarten is the necessary preparation for first grade where reading is an important subject, then out of a curriculum of reading readiness in the kindergarten should emerge those traits which indicate the child's readiness not only to call word symbols but to comprehend them in their proper relations. Until this is done the kindergarten curriculum will not be making its full or complete contribution to one of the factors which is conceded as an important subject for first grade. Although mental age will be highly significant in determining the child's mental readiness, it will not determine that he has the informational readiness without which words are empty sounds to him.

The median weighting of 32.5 percent given to general ability to do first grade work and used by 57.9 percent of the public school administrators may indicate a dawning sense of the importance of this factor. However, the lack of a definition in the questionnaire as to what this factor may include, makes its inter-

<sup>16</sup> Trenton Course of Study, Horace Mann Conduct Curriculum, Kalamazoo Course of Study, San Francisco Course of Study.

<sup>17</sup> Bobbitt, Franklin, *How to Make a Curriculum*, Chap. II, p. 30, 1924.

pretation indefinite. The record cards procured from administrators giving data on this study were comparatively few in number; and, generally speaking, were not amenable to any technique for obtaining the data which show child growth in curriculum requirements.

The admission of non-kindergarten children to first grade needs to be on a basis of the most objective measurements, and the most reliable index that can be secured of a child's ability to do first grade work. If a child is to accomplish a prescribed first grade curriculum the utmost care needs to be taken to determine his status or readiness for this curriculum content and to discover whether he has the ability to master it. If the child enters a school where the curriculum adjusts to his present status, the records of his physical, social, emotional, and mental status are important to indicate what he may be expected to accomplish. Either type of curriculum calls for measurements in the same factors; but since the standards for admission to first grade are different the use of the measurements differs. Ninety-eight and eight-tenths percent of the public school administrators use chronological age with a median weighting of 100 percent for the admission of non-kindergarten children to first grade. Surely chronological age is not sufficient information for a teacher to have in order to give a child his most felicitous start in first grade.

The importance of selecting as a basis for promotion those curriculum factors most important for the development of traits of behavior which constitute efficient individual and social life is also significant in the light of emphasis which both pupil and teacher give to these factors. "Teachers and pupils will inevitably work for the elements represented in the instruments by which their success is measured."<sup>18</sup> Measuring up to standards in the factors used for promotion is the criterion of success usually set up by administrators and accepted by teachers. Attempts to meet these standards are the child's test in experiencing success or failure, and the teacher's test in demonstrating her ability to help children meet the requirements which higher authority demands. Both are extrinsic values but none the less important to teacher and pupil. Professional and financial recognition for the teacher are many times determined by her ability to have the children

<sup>18</sup> "Curriculum Making," *Twenty-sixth Year Book, National Society for the Study of Education*, Part II, Chap. I, 1927.

under her guidance accomplish the requirements necessary for promotion. For the responsible authority to select any one curriculum requirement as a promotion canon and to demand any given amount of that requirement without having secured a scientific basis for the placement of the requirement is not in conformity with current scientific procedure, and fails to insure the proper balance of emphasis on such valuable educational outcomes in the child as the worthy use of leisure time, practical efficiency, health, and citizenship.

An examination of the composite statements made by the group of thirteen experts in curriculum making, as reported in the *Twenty-sixth Yearbook of the National Society for the Study of Education*,<sup>19</sup> finds little justification for an evaluation of the child's progress solely on the bases of chronological age in the kindergarten and of reading in the first grade; but the data of this study are conclusive that these are the decisive factors in current practice for the admission of children to the first grade and for their promotion therefrom.

This committee contends that curriculum makers should seek the material which on every possible occasion would tend to develop in the child comprehending and tolerant views of the world. Especially should human relations in the classroom be so handled as to include as many types and varieties as can efficiently be made to function in the experience of pupils.

"The materials of instruction (individual and group activities of children, reading, open forum, discussion, excursion, what-not) will be chosen in the light of the analysis and appraisal of activities in which people old and young most universally and permanently engage. This is just as necessary in the case of the finer types of appreciation as in the case of the most highly specialized skills." This statement does not support the present practice of promotion from first grade which places the emphasis on reading and neglects the subjects of art, music, and nature.

Since the materials of instruction according to curriculum experts should be selected on a basis of giving the learner the most help in meeting and controlling life situations, it would seem logical that a child should progress from one unit of work to the next according to his growth in "the important attitudes, generalizations, and appreciations as well as skills and knowledges"

<sup>19</sup> "Curriculum Making," *Twenty-sixth Yearbook, National Society for the Study of Education*, Part II, Chap. I, 1927.

of materials which are of the greatest social value. There are no data at present and it is doubtful if there ever will be data that prove that reading ability gives an adequate measure of the child's growth in social values. This conclusion is especially pertinent in the light of studies (1) which show that, in the teacher's opinion, 20 percent of first grade children are not ready to learn to read, and (2) that children before the mental age of six years are not ready to do first grade work.

The data used in this chapter as the basis of the discussion of factors which determine the admission of children to first grade, and their promotion from low first to high first and from high first to second grade, are presented in tabulated form on pages 31 to 51 inclusive.

The first eight of the twenty tables assembled deal with responses of administrators to questions relating to admission of children to first grade; Tables IX to XIX inclusive present material on the subject of promotion of pupils from low first to high first and from high first to second grade; Table XXA relates to promotion standards; and Table XXB to individual promotions.

TABLE I

CLASSIFICATION ACCORDING TO TYPES OF RESPONSES OF SUPERINTENDENTS, SUPERVISORS, AND PRINCIPALS OF PUBLIC SCHOOLS, AND DIRECTORS OF LABORATORY SCHOOLS WHO CHECKED FACTORS USED FOR ADMISSION OF CHILDREN TO FIRST GRADE

ADMINISTRATORS BY GROUPS	SUPERINTENDENTS OF P. S.	SUPERVISORS OF P. S.	PRINCIPALS OF P. S.	DIRECTORS OF LAB. S.	TOTAL
Total No. responding.....	90	94	20	15	219
No. checking some or all Factors for Admission of Kindergarten and Non-kindergarten Children .....	84	92	19	13	209
No. checking Factors for Admission of Kindergarten Children only .....	41	77	19	12	149
No. checking Factors for Admission of Non-kindergarten Children only .....	67	59	13	8	147

TABLE II

NUMBER AND PERCENT OF TIMES EACH FACTOR FOR ADMISSION OF KINDERGARTEN AND NON-KINDERGARTEN CHILDREN TO FIRST GRADE WAS CHECKED FOR SOME WEIGHTING BETWEEN ZERO AND 100 PERCENT IN RELATION TO THE NUMBER OF TIMES ALL FACTORS WERE CHECKED BY EACH OF FOUR GROUPS OF ADMINISTRATORS

TIMES EACH FACTOR WAS CHECKED BY ADMINISTRATORS																
FACTORS FOR ADMISSION TO FIRST GRADE	SUPERINTENDENTS				SUPERVISORS				PRINCIPALS				DIRECTORS			
	Kgtn.		Non-Kgtn.		Kgtn.		Non-Kgtn.		Kgtn.		Non-Kgtn.		Kgtn.		Non-Kgtn.	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1. Chronological Age	41	37.2	67	60.3	64	28.7	57	64.0	17	29.8	13	44.8	9	18.7	6	24.0
2. Mental Age	14	12.7	9	8.1	34	15.2	4	4.4	8	14.0	4	13.7	10	20.8	5	20.0
3. General Health	7	6.3	7	6.3	29	13.0	6	6.6	7	12.2	3	10.3	5	10.4	3	12.0
4. Physical Maturity	16	14.5	9	8.1	19	8.5	8	8.9	5	8.7	4	13.7	7	14.5	3	12.0
5. Emotional Stability	4	3.6	1	0.9	14	6.2	3	3.3	2	3.5	1	3.4	4	8.3	3	12.0
6. Health Habits	2	1.8	1	0.9	8	3.5	0	0.0	3	5.2	1	3.4	4	8.3	1	4.0
7. General Conduct	4	3.6	2	1.8	11	4.9	0	0.0	1	1.7	1	3.4	2	4.1	1	4.0
8. General Ability	22	20.0	15	13.5	36	16.1	9	10.1	14	24.5	2	6.9	5	10.4	2	8.0
9. Social Age	1	0.0	0	0.0	2	0.9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
10. Two Semesters in Kgtn.	0	0.0	0	0.0	1	0.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
11. Attendance	0	0.0	0	0.0	1	0.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
12. Parent Judgment	0	0.0	0	0.0	1	0.4	0	0.0	0	0.0	0	0.0	1	2.0	1	4.0
13. Language Requirement	0	0.0	0	0.0	1	0.4	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0
14. Crowded Conditions	0	0.0	0	0.0	1	0.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
15. Entrance Class Test	0	0.0	0	0.0	1	0.4	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0
Total	111	99.7	111	99.9	223	99.4	89	99.3	57	99.6	29	99.6	48	99.5	25	100.0

TABLE III

PERCENTAGE OF EACH GROUP OF ADMINISTRATORS WHO USED FOR SOME  
WEIGHTING BETWEEN ZERO AND 100 PERCENT EACH FACTOR FOR AD-  
MISSION OF KINDERGARTEN AND NON-KINDERGARTEN CHILDREN TO  
FIRST GRADE

FACTORS FOR ADMISSION TO FIRST GRADE	PERCENTAGE OF ADMINISTRATORS USING EACH FACTOR								TOTAL
	SUPERIN- TENDENTS		SUPER- VISORS		PRINCIPALS		DIRECTORS		
	Kgtn.	Non- Kgtn.	Kgtn.	Non- Kgtn.	Kgtn.	Non- Kgtn.	Kgtn.	Non- Kgtn.	
1. Chronological Age	100.0	100.0	83.1	96.6	89.4	100.0	75.0	75.0	86.8
2. Mental Age . . . . .	34.1	13.4	44.1	6.7	42.1	30.7	83.3	62.5	50.9
3. General Health ..	17.0	10.4	37.6	10.1	36.8	23.0	41.6	37.5	26.7
4. Physical Maturity	39.0	13.4	24.6	13.5	26.3	30.7	58.3	37.5	30.4
5. Emotional Stabil- ity .....	9.7	1.4	18.1	5.0	10.5	7.6	33.3	37.5	15.3
6. Health Habits ...	4.8	1.4	10.3	0.0	15.7	7.6	33.3	12.5	10.6
7. General Conduct .	9.7	2.9	14.2	0.0	5.2	7.6	16.6	12.5	8.5
8. General Ability to do First Grade work .....	53.6	22.3	46.7	15.2	73.6	15.3	41.7	25.0	36.4

TABLE IV

NUMBER OF TIMES EACH FACTOR FOR ADMISSION TO FIRST GRADE OF KINDERGARTEN AND NON-KINDERGARTEN CHILDREN WAS USED WITH MEDIAN PERCENT WEIGHTING GIVEN BY EACH OF FOUR GROUPS OF ADMINISTRATORS\*

WEIGHTINGS GIVEN BY ADMINISTRATORS																		
FACTORS FOR ADMISSION TO FIRST GRADE	SUPERINTENDENTS				SUPERVISORS				PRINCIPALS				DIRECTORS			TOTAL		
	Kgtn.		Non-Kgtn.		Kgtn.		Non-Kgtn.		Kgtn.		Non-Kgtn.		Kgtn.		Non-Kgtn.		Kgtn	Non-Kgtn
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%				
1. Chronological Age	41	86.1	67	100.0	64	90.5	57	100.0	17	56.2	13	100.0	9	35.0	6	90.0	75.5	97.5
2. Mental Age	14	27.6	9	37.5	34	30.0	4	2.5	8	23.3	4	15.0	10	36.6	5	45.0	29.0	39.0
3. General Health	7	14.1	7	18.3	29	14.7	6	17.5	7	15.0	3	15.0	5	22.5	3	22.5	10.5	14.5
4. Physical Maturity	16	13.0	9	16.2	19	12.5	8	15.0	5	17.5	4	20.0	7	21.2	3	15.0	16.0	15.3
5. Emotional Stability	4	16.6	1	15.0	14	13.0	3	17.5	2	10.0	1	15.0	4	20.0	3	15.0	14.0	8.1
6. Health Habits	2	10.0	1	6.0	8	12.0	0	0.0	3	12.5	1	15.0	4	15.0	1	6.0	12.3	2.5
7. General Conduct	4	13.3	2	100.0	11	12.5	0	0.0	1	6.0	1	15.0	2	10.0	1	6.0	8.8	5.2
8. General Ability to do First Grade Work	22	27.5	15	19.2	36	20.0	9	27.5	14	50.0	2	40.0	5	25.0	2	15.0	30.6	21.6
9. Social Age		0.0	1	15.0	2	10.0	0	0.0	0	0.0	0	0.0	1	40.0	0	0.0	0.0	0.0
10. Two Semesters	0	0.0	0	0.0	1	25.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0
11. Attendance	0	0.0	0	0.0	1	15.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0
12. Parent Judgment	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	1	6.0	1	6.0	0.0	0.0
13. Language Requirement	0	0.0	0	0.0	1	15.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0
14. Crowded Conditions	0	0.0	0	0.0	1	70.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0
15. Entrance Class Test	0	0.0	0	0.0	1	100.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0

TABLE V

NUMBER AND PERCENTAGE OF TIMES CHECKED, OF DIFFERENT FACTORS USED FOR ADMISSION OF CHILDREN TO FIRST GRADE IN PUBLIC AND LABORATORY SCHOOLS, WITH MEDIAN WEIGHTING AND RANK

FACTORS FOR ADMISSION TO FIRST GRADE	TIMES FACTORS WERE CHECKED						ADMINISTRATORS CHECKING FACTORS				MEDIAN WEIGHTING			
	Public Schools			Laboratory Schools			Public Schools		Laboratory Schools		Public Schools		Laboratory Schools	
	No.	%	R	No.	%	R	%	R	%	R	%	R	%	R
1. Chronological Age ....	122	31.9	1	9	18.7	2	90.8	1	75.0	2	77.4	1	0.4	2
2. Mental Age .....	56	11.9	3	10	20.8	1	40.1	4	83.3	1	26.6	3	36.6	1
3. General Health .....	43	10.5	4.5	5	10.4	4.5	30.4	5	41.6	5	14.6	4	22.5	4
4. Physical Maturity ....	40	10.5	4.5	7	14.5	3	40.3	3	58.3	3	14.3	5	21.2	5
5. Emotional Stability ...	20	4.4	6	4	8.3	6.5	29.9	6	33.3	6.5	13.2	6	20.0	6
6. Health Habits .....	13	3.5	7	4	8.3	6.5	20.8	7	33.3	6.5	11.5	7	15.0	7
7. General Conduct .....	16	3.4	8	2	4.1	8.0	9.7	8	16.6	8	10.6	8	10.0	8
8. General Ability .....	72	20.3	2	5	10.4	4.5	57.9	2	41.7	4	32.5	2	25.0	3



TABLE VI

NUMBER AND PERCENTAGE OF RESPONSES OF EACH OF FOUR GROUPS OF ADMINISTRATORS IN RELATION TO PROMOTION ON READING AND NON-READING BASES

ADMINISTRATORS REPORTING	BASES USED FOR PROMOTION								
	READING BASIS		NON-READING BASIS		"YES AND No"		NOT REPORTING		TOTAL
	No.	%	No.	%	No.	%	No.	%	No.
Superintendents ....	57	87.0	8	12.3	0	0.0	25	11.4	90
Supervisors .....	54	76.0	15	21.1	2	0.9	23	10.9	94
Principals .....	1	5.5	17	94.4	0	0.0	2	0.9	20
Directors of Labora- tory Schools .....	7	58.3	5	41.6	0	0.0	3	1.4	15
Total .....	119	71.6	45	27.3	2	0.9	53		219



TABLE VIII

NUMBER OF YEARS A CHILD MAY REMAIN IN KINDERGARTEN AS REPORTED BY FOUR GROUPS OF ADMINISTRATORS

TIME LIMIT IN KINDERGARTEN	RESPONSES FROM ADMINISTRATORS									
	SUPT.		SUPV.		PRIN.		DIR.		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
½ Year .....	1	1.1	0	0	0	0.0	0	0.0	1	0.5
1 Year .....	3	3.3	11	11.7	0	0.0	1	6.6	15	6.8
1½ Year .....	3	3.3	6	6.3	0	0.0	0	0.0	9	4.1
2 Years .....	8	8.8	22	23.4	14	70.0	2	13.3	46	21.0
3 Years .....	0	0.0	1	1.0	0	0.0	0	0.0	1	0.5
To C. A. 6 .....	0	0.0	1	1.0	0	0.0	0	0.0	1	0.5
To C. A. 6½ .....	0	0.0	2	2.1	0	0.0	0	0.0	2	0.9
To C. A. 7 .....	0	0.0	2	2.1	0	0.0	0	0.0	2	0.9
No Limit .....	18	20.0	21	22.3	4	20.0	9	60.0	52	23.7
Not Reported .....	57	63.3	28	29.7	2	10.0	3	20.0	90	41.0
Total .....	90	99.8	94	99.6	20	100.0	15	99.9	219	99.9

TABLE IX

CLASSIFICATION OF RESPONSES FROM SUPERINTENDENTS, SUPERVISORS, AND PRINCIPALS OF PUBLIC SCHOOLS, AND DIRECTORS OF EXPERIMENTAL AND NORMAL TRAINING SCHOOLS, RELATING TO STANDARDS USED TO PROMOTE CHILDREN FROM LOW FIRST TO HIGH FIRST GRADE AND FROM HIGH FIRST TO SECOND GRADE

ADMINISTRATORS BY GROUPS	STANDARDS CHECKED	
	Low to High First	High First to Second
Superintendents .....	33	59
Supervisors .....	57	66
Principals .....	9	16
Directors of Private and Experimental Schools ...	7	10
Total .....	106	151

TABLE X  
NUMBER AND PERCENTAGE OF TIMES CHECKED, AND RANK AS TO WEIGHTING OF EACH FACTOR FOR PROMOTION OF CHILDREN FROM LOW TO HIGH FIRST GRADE BY FOUR GROUPS OF ADMINISTRATORS

WEIGHTINGS GIVEN BY ADMINISTRATORS														
PROMOTION FACTORS	SUPERINTENDENTS			SUPERVISORS			PRINCIPALS			DIRECTORS			TOTAL	
	No.	%	R.	No.	%	R.	No.	%	R.	No.	%	R.	No.	%
1. Reading .....	33	18.9	1	57	21.4	1	7	15.2	1.5	6	21.4	1	103	86.1
2. Number .....	19	10.8	2	10	3.7	11.5	4	8.6	6	2	7.1	7	35	30.2
3. Language .....	15	8.5	4	33	12.4	2	4	8.6	6	3	10.7	4	55	40.2
4. Art .....	3	1.7	14.5	11	4.1	10	1	2.1	11.5	2	0.0	7	15	7.9
5. Social Adjustment ..	17	9.6	3	26	9.7	3	4	8.6	6	2	7.1	0	49	35.0
6. Nature .....	4	2.2	12.5	3	1.1	15.5	4	0.0	0	0	0.0	0	7	3.3
7. Music .....	3	1.7	14.5	2	.7	17	0	0.0	0	0	0.0	0	5	2.4
8. Writing .....	11	6.2	6	10	3.7	11.5	5	10.8	4	0	0.0	0	26	20.7
9. Spelling .....	8	4.5	10.5	6	2.2	13.5	2	0.0	0	0	0.0	0	14	6.7
10. Physical Maturity ...	10	5.7	7	13	4.8	9	2	4.3	9.5	1	3.5	10	26	18.3
11. Chronological Age ...	6	3.3	16	16	6.0	5	7	15.2	1.5	3	10.7	4	32	35.2
12. Mental Age .....	12	6.8	5	21	7.8	4	6	13.0	3	4	14.2	2	43	41.8
13. Emotional Stability ..	2	1.2	17	6	2.2	13.5	0	0.0	0	0	0.0	0	8	3.4
14. General Health .....	8	4.5	10.5	15	5.6	6.5	1	2.1	11.5	1	3.5	10	25	15.7
15. Health Habits .....	1	.5	18.5	3	1.1	15.5	0	0.0	0	0	0.0	0	4	1.6
16. Attendance .....	9	5.1	8.5	14	5.2	8	2	4.3	9.5	2	7.1	7	27	21.7
17. Effort .....	9	5.2	8.5	15	5.6	6.5	3	6.5	8	3	10.7	4	30	28.0
18. General Conduct ....	4	2.2	12.5	5	1.8	18	0	0.0	0	1	3.5	10	10	7.5
19. Failure in more than one subject .....	1	.5	18.5	0	0.0	0	0	0.0	0	0	0.0	0	1	.5
Total .....	175	99.1		266	99.1		46	99.3		28	99.4			

TABLE XI

NUMBER AND PERCENTAGE OF TIMES CHECKED, AND RANK AS TO WEIGHTING OF EACH FACTOR FOR PROMOTION OF CHILDREN FROM HIGH FIRST TO SECOND GRADE, BY FOUR GROUPS OF ADMINISTRATORS

PROMOTION FACTORS	WEIGHTINGS GIVEN BY ADMINISTRATORS													
	SUPERINTENDENTS			SUPERVISORS			PRINCIPALS			DIRECTORS			TOTALS	
	No.	%	R	No.	%	R	No.	%	R	No.	%	R	No.	%
1. Reading .....	57	18.3	1	66	22.0	1	16	20.0	1	8	16.0	1	147	76.3
2. Number .....	41	13.2	2	27	9.0	3	8	10.0	5	3	6.0	9	79	38.2
3. Language .....	36	11.6	3	39	13.0	2	10	12.5	2.5	5	10.0	5	90	47.1
4. Art .....	5	1.6	15	7	2.3	13	0	0.0	0	1	2.0	11.5	13	5.9
5. Social Adjustment ...	19	6.1	6	19	6.3	6	9	11.2	4	5	10.0	5	52	33.6
6. Nature Study .....	5	2.2	14	2	.6	16.5	0	0.0	0	0	0.0	0	7	2.8
7. Music .....	0	0.0	0	3	1.0	15	0	0.0	0	0	0.0	0	3	1.0
8. Writing .....	28	9.0	4	22	7.3	4	3	3.7	9.5	0	0.0	0	53	20.0
9. Spelling .....	20	6.4	5	17	5.6	7	1	1.2	12	0	0.0	0	38	13.2
10. Physical Maturity ...	11	3.5	11	10	3.3	12	5	6.2	8	2	4.0	10	28	17.0
11. Chronological Age ...	18	5.8	7	15	5.0	9	6	7.5	7	4	8.0	8	43	26.3
12. Mental Age .....	17	5.4	8	21	7.0	5	10	12.5	2.5	6	12.0	2	54	36.9
13. Emotional Stability ..	4	1.2	16	5	1.6	14	0	0.0	0	5	10.0	5	14	12.8
14. General Health .....	10	3.2	12	15	5.0	9	3	3.7	9.5	5	10.0	5	33	21.9
15. Health Habits .....	2	.6	17	2	.6	16.5	0	0.0	0	0	0.0	0	4	1.2
16. Attendance .....	14	4.5	10	12	4.0	11	2	2.5	11	1	2.0	11.5	29	13.0
17. Effort .....	16	5.1	9	15	5.0	9	7	8.7	6	5	10.0	5	43	28.8
18. General Conduct ....	6	1.9	13	2	.6	18	0	0.0	0	0	0.0	0	8	2.5
19. Failure in more than one subject .....	1	.3	18	0	0.0	0	0	0.0	0	0	0.0	0	1	.3
Total .....	310	99.9		299	99.2		80	99.7		50	100.0			

TABLE XII

NUMBER AND PERCENTAGE OF TIMES CHECKED OF EACH FACTOR FOR PROMOTION FROM LOW FIRST TO HIGH FIRST GRADE AND FROM HIGH FIRST TO SECOND GRADE IN PUBLIC AND LABORATORY SCHOOLS

PROMOTION FACTORS	LOW FIRST TO HIGH FIRST				HIGH FIRST TO SECOND			
	Pub. Sch. Admin.		Lab. Sch. Directors		Pub. Sch. Admin.		Lab. Sch. Directors	
	No.	%	No.	%	No.	%	No.	%
Group A Subjects								
Reading .....	97	19.9	6	21.4	139	20.1	8	16.0
Number .....	33	6.7	2	7.1	76	11.0	3	6.0
Language .....	52	10.0	3	10.7	85	12.3	5	10.0
Writing .....	26	5.3	0	0.0	53	7.5	0	0.0
Spelling .....	14	2.8	0	0.0	38	5.4	0	0.0
Total .....	222	44.7	11	39.2	391	56.3	16	32.0
Group B Subjects								
Art .....	15	3.0	0	0.0	12	1.7	1	2.0
Nature Study .....	7	1.4	0	0.0	7	1.0	0	0.0
Music .....	5	1.0	0	0.0	3	0.4	0	0.0
Total .....	27	5.4	0	0.0	22	3.1	1	2.0
Group C Subjects								
Physical Maturity .....	25	5.1	1	3.5	26	3.7	2	4.0
Emotional Stability .....	8	1.6	0	0.0	9	1.3	5	10.0
General Health .....	24	4.9	1	3.5	28	4.0	5	10.0
Health Habits .....	4	0.8	0	0.0	4	0.5	0	0.0
Total .....	61	12.4	2	7.0	67	9.5	12	24.0
Group D Subjects								
Attendance .....	25	5.1	2	7.1	28	4.0	1	2.0
Effort .....	27	5.5	3	10.7	38	5.5	5	10.0
General Conduct .....	9	1.8	1	3.5	8	1.1	0	0.0
Total .....	61	12.4	6	21.3	74	10.7	6	12.0
Chronological Age .....	29	5.4	3	10.7	39	5.6	4	8.0
Mental Age .....	39	8.2	4	14.2	48	6.9	6	12.0
Social Adjustment .....	47	9.6	2	7.1	47	6.8	5	10.0

TABLE XIII

NUMBER AND PERCENT OF EACH OF FOUR GROUPS OF ADMINISTRATORS  
WHO USED EACH FACTOR FOR PROMOTION OF CHILDREN FROM LOW  
FIRST TO HIGH FIRST GRADE

PROMOTION FACTORS	NUMBER OF ADMINISTRATORS USING FACTORS							
	SUPERIN- TENDENTS		SUPER- VISORS		PRINCI- PALS		DIRECTORS	
	No.	%	No.	%	No.	%	No.	%
1. Reading .....	33	100.0	57	100.0	7	77.7	6	85.1
2. Number .....	19	57.5	10	17.5	4	44.4	2	28.5
3. Language .....	15	45.4	33	57.9	4	44.4	3	42.8
4. Art .....	3	9.0	11	19.2	1	11.1	0	0.0
5. Social Adjustment .....	17	51.5	26	45.6	4	44.4	2	28.5
6. Nature Study .....	4	12.1	3	5.2	0	0.0	0	0.0
7. Music .....	3	9.0	2	3.5	0	0.0	0	0.0
8. Writing .....	11	33.3	10	17.5	5	55.5	0	0.0
9. Spelling .....	8	24.2	6	10.5	0	0.0	0	0.0
10. Physical Maturity .....	10	30.3	13	22.8	2	22.2	1	14.2
11. Chronological Age .....	6	18.1	16	28.0	7	77.7	3	42.8
12. Mental Age .....	12	36.3	21	36.8	6	66.6	4	57.1
13. Emotional Stability .....	2	6.0	6	10.5	0	0.0	0	0.0
14. General Health .....	8	24.2	15	26.3	1	11.1	1	14.2
15. Health Habits .....	1	3.0	3	5.2	0	0.0	0	0.0
16. Attendance .....	9	27.2	14	24.5	2	22.2	2	28.5
17. Effort .....	9	27.2	15	26.3	3	33.3	3	42.8
18. General Conduct .....	4	12.1	5	8.7	0	0.0	1	14.2
19. Failure in more than one subject .....	1	0.0	0	0.0	0	0.0	0	0.0



TABLE XIV

NUMBER AND PERCENT OF EACH OF FOUR GROUPS OF ADMINISTRATORS  
WHO USED EACH FACTOR FOR PROMOTION OF CHILDREN FROM HIGH  
FIRST TO SECOND GRADE

PROMOTION FACTORS	SUPERINTENDENTS		SUPERVISORS		PRINCIPALS		DIRECTORS OF LAB. SCHOOLS	
	No.	%	No.	%	No.	%	No.	%
1. Reading .....	57	96.6	66	100.0	16	100.0	8	80.0
2. Number .....	41	69.4	27	40.9	8	50.0	3	30.0
3. Language .....	36	61.0	39	59.0	10	62.5	5	50.0
4. Art .....	5	8.4	7	10.6	0	0.0	1	10.0
5. Social Adjustments .....	19	32.2	19	28.8	9	56.2	5	50.0
6. Nature Study .....	5	8.4	2	3.0	0	0.0	0	0.0
7. Music .....	0	0.0	3	4.5	0	0.0	0	0.0
8. Writing .....	28	47.4	22	33.3	3	18.7	0	0.0
9. Spelling .....	20	33.9	17	25.7	1	6.2	0	0.0
10. Physical Maturity .....	11	18.6	10	15.1	5	31.2	2	20.0
11. Chronological Age .....	18	30.5	15	22.7	6	37.5	4	40.0
12. Mental Age .....	17	28.8	21	31.8	10	62.5	6	60.0
13. Emotional Stability .....	4	6.7	5	7.5	0	0.0	5	50.0
14. General Health .....	10	16.9	15	22.7	3	18.7	5	50.0
15. Health Habits .....	2	3.3	2	3.0	0	0.0	0	0.0
16. Attendance .....	14	23.7	12	18.1	2	12.5	1	10.0
17. Effort .....	16	27.1	15	22.7	7	43.7	5	50.0
18. General Conduct .....	6	10.1	2	3.0	0	0.0	0	0.0
19. Ability .....	1	1.6	0	0.0	0	0.0	0	0.0

TABLE XV

NUMBER AND PERCENT OF ADMINISTRATORS WHO USED EACH FACTOR  
FOR PROMOTION OF CHILDREN FROM LOW TO HIGH FIRST GRADE AND  
FROM HIGH FIRST TO SECOND GRADE IN PUBLIC AND LABORATORY  
SCHOOLS

PROMOTION FACTORS	LOW FIRST TO HIGH FIRST				HIGH FIRST TO SECOND			
	Pub. Sch. Admin.		Lab. Sch. Directors		Pub. Sch. Admin.		Lab. Sch. Directors	
	No.	%	No.	%	No.	%	No.	%
Group A Subjects								
Reading .....	97	97.9	6	85.1	139	98.8	8	80.0
Number .....	33	33.3	2	28.5	76	53.9	3	30.0
Language .....	52	52.5	3	42.8	85	60.2	5	50.0
Writing .....	26	26.2	0	0.0	53	37.5	0	0.0
Spelling .....	14	14.1	0	0.0	38	26.9	0	0.0
Total .....	222	44.8	11	31.2	391	55.4	16	30.0
Group B Subjects								
Art .....	15	15.5	0	0.0	12	8.5	1	10.0
Nature .....	7	6.9	0	0.0	7	4.9	0	0.0
Music .....	5	4.9	0	0.0	3	2.1	0	0.0
Total .....	27	9.1	0	0.0	22	5.1	1	33.3
Group C Subjects								
Physical Maturity .....	25	25.2	1	14.2	26	18.4	2	20.0
Emotional Stability .....	8	8.0	0	0.0	9	6.3	5	50.0
General Health .....	24	24.2	1	14.2	28	19.8	5	50.0
Health Habits .....	4	4.0	0	0.0	4	2.8	0	0.0
Total .....	61	15.3	2	7.1	67	14.3	12	30.0
Group D Subjects								
Attendance .....	25	25.2	2	28.5	28	19.8	1	10.0
Effort .....	27	27.2	3	42.8	38	26.9	5	50.0
General Conduct .....	9	8.9	1	14.2	8	5.6	0	0.0
Total .....	61	20.4	6	28.5	74	17.4	6	20.0
Chronological Age .....	29	29.1	3	42.8	39	27.6	4	40.0
Mental Age .....	39	39.2	4	57.1	48	34.0	6	60.0
Social Adjustment .....	47	47.4	2	28.5	47	33.3	5	50.0

TABLE XVI

NUMBER USING AND MEDIAN PERCENT WEIGHTINGS OF DIFFERENT FACTORS FOR PROMOTION FROM LOW FIRST TO HIGH FIRST GRADE AND FROM HIGH FIRST TO SECOND GRADE BY EACH OF FOUR GROUPS OF ADMINISTRATORS

PROMOTION FACTORS	WEIGHTINGS GIVEN BY ADMINISTRATORS											
	SUPERINTENDENTS				SUPERVISORS				PRINCIPALS			
	Li to Hi		Hi to 2		Li to Hi		Hi to 2		Li to Hi		Hi to 2	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1. Reading .....	33	64.8	57	61.9	57	71.3	66	67.5	7	56.2	16	58.3
2. Number .....	19	17.3	41	18.4	10	14.2	27	15.5	4	13.3	8	15.7
3. Language .....	15	17.5	36	16.6	33	18.5	39	17.3	4	16.6	10	20.0
4. Art .....	3	6.0	6	11.6	11	13.0	7	11.2	1	15.0	0	0.0
5. Social Adjustment .....	17	15.5	19	14.6	26	14.6	19	16.8	4	16.6	9	17.0
6. Nature Study .....	4	6.0	5	13.7	3	5.0	2	6.0	0	0.0	0	0.0
7. Music .....	3	8.5	0	0.0	2	15.0	3	17.5	0	0.0	0	0.0
8. Writing .....	11	14.3	28	14.7	10	15.0	23	13.4	5	13.7	3	15.0
9. Spelling .....	8	14.2	20	14.7	6	8.5	17	13.0	0	0.0	1	15.0
10. Physical Maturity .....	10	13.7	11	9.1	13	14.3	10	8.1	2	15.0	5	13.7
11. Chronological Age .....	6	15.0	18	14.6	16	13.6	15	15.0	7	15.0	6	16.0
12. Mental Age .....	12	15.5	17	15.4	21	15.9	21	15.7	6	13.3	10	20.0
13. Emotional Stability .....	2	15.0	4	6.6	6	12.5	5	11.6	0	0.0	0	0.0
14. General Health .....	8	13.3	10	11.6	15	14.5	15	14.5	1	6.0	3	15.0
15. Health Habits .....	1	6.0	2	10.0	3	15.0	2	15.0	0	0.0	0	0.0
16. Attendance .....	9	13.5	14	14.5	14	12.8	12	14.2	2	10.0	2	15.0
17. Effort .....	9	14.7	16	15.3	15	15.6	15	14.1	3	12.5	7	15.8
18. General Conduct .....	4	10.0	6	15.0	5	13.7	2	10.0	0	0.0	0	0.0
19. Ability .....	0	0.0	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0
20. Failing in more than two subjects	1	94.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

TABLE XVII

NUMBER USING AND MEDIAN PERCENT WEIGHTINGS OF FACTORS FOR PROMOTION FROM LOW FIRST TO HIGH FIRST AND FROM HIGH FIRST TO SECOND GRADE IN PUBLIC AND LABORATORY SCHOOLS

PROMOTION FACTORS	LOW FIRST TO HIGH FIRST				HIGH FIRST TO SECOND			
	PUB. SCH. ADMIN.		LABORATORY SCHOOL		PUB. SCH. ADMIN.		LABORATORY SCHOOL	
	No.	%	No.	%	No.	%	No.	%
Group A								
Reading .....	97	64.1	6	58.3	139	62.5	8	50.0
Number .....	33	44.8	2	15.0	76	16.5	3	15.0
Language .....	52	14.2	3	17.5	85	17.9	5	16.2
Writing .....	26	14.3	0	0.0	54	14.3	0	0.0
Spelling .....	14	7.5	0	0.0	38	14.2	0	0.0
Total .....	222	28.9	11	18.3	392	25.0	16	16.2
Group B								
Art .....	15	11.3	0	0.0	13	7.6	1	25.0
Nature .....	7	3.6	0	0.0	7	6.5	0	0.0
Music .....	5	7.8	0	0.0	3	17.5	0	0.0
Total .....	27	7.5	0	0.0	23	10.5	1	8.3
Group C								
Physical Maturity .....	25	14.3	1	15.0	26	10.3	2	15.0
Emotional Stability .....	8	9.1	0	0.0	9	18.2	5	18.3
General Health .....	24	11.2	1	15.0	28	13.7	5	16.2
Health Habits .....	4	7.0	0	0.0	4	8.3	0	0.0
Total .....	61	13.8	2	7.3	67	16.8	12	12.3
Group D								
Attendance .....	25	12.1	2	15.0	28	14.5	1	15.0
Effort .....	27	14.2	3	17.5	38	15.0	5	16.2
General Conduct .....	9	7.9	1	15.0	8	8.3	0	0.0
Total .....	61	11.4	6	15.8	74	12.6	6	10.2
Chronological Age .....	29	14.5	3	15.0	39	15.2	4	16.6
Mental Age .....	39	14.9	4	20.0	48	17.0	6	20.0
Social Adjustment .....	47	15.5	2	15.0	57	16.1	5	21.6

TABLE XVIII  
INFLUENCE OF ROOM SPACE AS A FACTOR IN THE PRACTICE OF EACH OF FOUR GROUPS OF ADMINISTRATORS IN  
DETERMINING PROMOTION OF CHILDREN FROM FIRST TO SECOND GRADE

REPORTED BY	INFLUENCE OF ROOM SPACE ON PROMOTION									
	DIRECTION					EXTENT				
	Increases Promo- tions	Decreases Promo- tions	Not a Factor	Not Reported	Total	Much	Little	None	Little or None	Total
Superintendents .....	10	1	0	79	90	1	16	40	0	90
Supervisors .....	12	2	14	66	94	5	22	48	0	94
Principals .....	2	1	2	15	20	3	2	12	2	20
Directors .....	3	0	1	11	15	3	3	10	0	15
Total .....	27	4	17	171	219	9	43	110	2	219
Percent of Total .....	12.3	1.8	7.7	78.0	99.8	4.1	19.5	50.2	.9	99.8
Percent of Those Reporting	56.2	8.3	35.2	0	99.7	5.4	26.2	67.0	1.2	99.8



TABLE XX-A  
NUMBER AND PERCENT OF TIMES REPORTED OF VARIOUS PERSONS WHO DETERMINE PROMOTION STANDARDS, IN  
VARIOUS RANKS OF IMPORTANCE, 1 BEING MOST IMPORTANT, 6 BEING LEAST IMPORTANT

PERSONS DETERMINING STANDARDS	1		2		3		4		5		6		CONSULTATION		CHECKED BUT NOT RANKED	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Superintendent .....	42	37.1	13	13.1	10	17.2	14	48.2	1	100.0	0	0.0	18	21.1	16	27.5
Asst. Supt. ....	5	4.4	7	7.0	1	1.7	2	6.8	0	0.0	0	0.0	9	10.5	1	1.7
Supervisor .....	33	29.1	14	14.4	6	10.3	1	3.4	0	0.0	0	0.0	19	22.3	5	8.6
Principal .....	8	7.0	33	33.3	19	32.7	4	13.7	0	0.0	0	0.0	18	21.1	16	27.5
Teacher .....	24	21.2	28	28.2	21	36.2	6	20.6	0	0.0	0	0.0	16	18.8	18	31.0
Board of Education .....	0	0.0	3	3.0	1	1.7	2	6.7	0	0.0	1	100.0	3	3.5	2	3.4
State .....	1	.8	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Psychologist .....	0	0.0	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	2	2.3	0	0.0
Total .....	113	99.6	99	100.0	58	99.8	29	100.0		100.0	1	100.0	85	99.6	58	99.7

TABLE XX-B

NUMBER AND PERCENT OF TIMES REPORTED OF VARIOUS PERSONS WHO DETERMINE INDIVIDUAL PROMOTIONS, IN VARIOUS RANKS OF IMPORTANCE, 1 BEING MOST IMPORTANT, 6 BEING LEAST IMPORTANT

PERSONS DETERMINING PROMOTION OF GIVEN CHILD	1		2		3		4		5		6		CONSULTATION		CHECKED BUT NOT RANKED	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Superintendent .....	6	3.7	14	10.0	26	26.5	15	62.5	5	62.5	0	0.0	1	5.8	3	18.7
Asst. Supt. ....	0	0.0	2	1.4	4	4.0	5	20.8	1	12.5	0	0.0	1	5.8	0	0.0
Supervisor .....	3	1.8	7	5.0	40	40.8	1	4.1	0	0.0	0	0.0	4	23.5	1	6.2
Principal .....	18	11.1	94	67.1	25	25.5	1	4.1	0	0.0	0	0.0	4	23.5	4	25.0
Teacher .....	134	83.2	22	15.6	3	3.0	0	8.3	0	0.0	0	0.0	7	41.2	8	50.0
Board of Education .....	0	0.0	1	0.7	0	0.0	2	0.0	2	25.0	0	0.0	0	0.0	0	0.0
Total .....	161	99.8	140	99.8	98	99.8	24	99.8	8	100.0	0	0.0	17	99.8	16	99.9



# CHAPTER III

## STANDARDS AND METHODS OF MEASURING PROMOTION FACTORS

### PROBLEMS

1. What standards determine admission to first grade?
2. What methods determine the status of children in different factors for their admission to first grade and their promotion from first grade?
3. How are the different measures combined or used in order to determine (a) the promotion of a child from kindergarten to low first grade, from low first grade to high first grade, and from high first grade to second grade; (2) to determine the group placement of a child within the kindergarten or first grade.

### PROCEDURE

The methods which are used by administrators to determine the status of children in relation to the different factors concerned with their admission and promotion were obtained by having each one of a group of superintendents, supervisors, principals, and directors of laboratory schools check his own method or methods from those listed in the questionnaire. An opportunity was given to subjoin any method which was not listed. A request was made that any card used to record or to rate the achievements of children be enclosed with the returned questionnaire. Data for the combination or use made of the different measures in deciding promotion or grouping were obtained by requesting the administrators to state the plan used.

The summary of findings combines statements of procedure from all the administrators reporting. The tables show the data as compiled from the reports of the different classes of administrators. The results are given in terms of the number of times and the percent that any given method was reported as being used in relation to the number of times all methods were reported as being used.

PART I: SUMMARY OF FINDINGS

I. STANDARDS AND METHODS OF MEASURING

*A. For Admission of Children to First Grade*

1. Chronological age was used by 75.5 percent of all the 219 administrators as a factor for the admission of children from kindergarten to first grade, and by 97.5 percent of these administrators for the admission of non-kindergarten children to first grade.

2. Out of the 219 administrators checking the questionnaire a normal chronological age of entrance of 6 years, or between 6 years and 7 years was reported by 157, or 71.6 percent; 5 years or between 5 years and 6 years was reported by 48, or 21.5 percent; no normal chronological age of entrance was reported by 6, or 2.7 percent.

3. There were 138, or 63.0 percent, of the administrators who reported that they admit children at a younger chronological age if the child is mentally above normal; 71, or 32.4 percent, reported that they may not vary the chronological age standard for admission of the children to Grade I; 10, or 4.5 percent, of the administrators did not reply to this question.

4. Ninety-six, or 43.8 percent, of the 219 administrators reported that they may refuse admission to Grade I to a child who is mentally below normal; 109, or 49.7, percent, reported that they may not refuse a child admittance to Grade I if he is mentally below normal; 14, or 6.3 percent, of the administrators did not reply.

5. A specific mental age for entrance was indicated by only 51, or 23.3 percent, of the 219 administrators. A mental age of 6 or between 6 years and 7 years was required by 42, or 14.1 per cent; a mental age of 5 or 5½ years was required by 8, or 3.6 percent, and a mental age of 7 was required by 1, or 0.4 percent.

6. Out of 219 administrators reporting 130, or 59.3 percent, reported the standard tests used to determine mental age; 89, or 40.6 percent, did not report tests used. Eighteen different standard tests were reported as being used to determine mental age. These tests were checked 175 times by the administrators replying. The Terman revision of the Binet-Simon was used by 62, or 35.4 percent of the administrators reporting the tests used to determine

mental age; the Pintner-Cunningham by 52, or 29.7 percent; the Detroit-First Grade by 23, or 13.1 percent; and the Detroit Kindergarten by 17, or 9.7 percent. Other tests were used in all by 22, or 12.1 percent.

7. General health was used by only 26.7 percent of all the 219 administrators as a factor for the admission of children to Grade I; although 87.6 percent reported the use of a method of rating general health in their schools.

8. Out of the 332 times that the three listed methods of making judgment were checked, teacher's estimate of physical fitness was used 120 times, or 36.19 percent; parent's judgment 80 times, or 24.0 percent; and the medical record made by the physician or the nurse 132 times, or 39.7 percent. The use of the estimates made by parents and teachers taken together exceeded the use of the medical record made by the nurse or the physician.

9. Physical maturity was checked by 30.4 percent of all the 219 administrators as a factor to determine the admission of children to Grade I. Out of the 219 administrators 81.3 percent indicated a method to determine physical maturity as being used in their schools.

10. The different methods to determine physical maturity which were listed on the questionnaire together with the two additional methods subjoined by those reporting were checked 353 times. Out of the 353 times that all methods were used, teacher's judgment was used 121 times, or 34.2 percent; parent's judgment was used 54 times, or 15.2 percent; observation of dentition 47 times, or 13.3 percent; height-weight index 121 times, or 34.2 percent; X-ray of carpal bones was used 5 times, or 1.4 percent; and the two methods subjoined—medical record and nurse's judgment together—were used 5 times or 1.4 percent. Any one of these methods was usually used in combination with one, two, or three other methods.

11. Health habits as a factor for admission to Grade I was used by only 10.6 percent of all of the administrators replying to the questionnaire, although 46.1 percent reported using a method to determine the health habits of children in the kindergarten.

12. The different methods to ascertain the health habits of children were checked 101 times. Teacher's rating on a 3 or 5 point scale was checked 47 times, or 46.5 percent; mark on percentage basis was checked 18 times, or 17.8 percent. Scorings—some-

times, often, never—were checked 25 times, or 24.7 percent. With this report on methods was filed a record sheet used by the principals of the selected public school system which shows the health habits considered most important for children of this age and which indicates the habits which different children have formed.

13. Emotional stability was used by 15.3 percent of all the 219 administrators as a factor to determine admission to Grade I; although 60.2 percent of these administrators reported using a method to ascertain a child's emotional stability.

14. The different methods listed for determining a child's emotional stability were checked 154 times. The teacher's qualitative estimate was used 132 times, or 85.0 percent; the rating card 18, or 11.6 percent. To the methods listed on the questionnaire three other methods were subjoined by those checking: test, supervisor's estimate, and psychologist's estimate. These three methods were checked 4 times, or 2.4 percent.

15. General conduct was used by only 8.5 percent of all the 219 administrators as a factor to determine the admission of children to Grade I; although 133, or 60.7 percent of these administrators named a method of rating general conduct which they used even though they did not use it as a factor for promotion.

16. The different methods of rating general conduct were checked 139 times. Out of these 139 times the teacher's rating on a 5 point scale was checked as being used 79 times, or 56.9 percent; mark on percentage basis 51 times, or 36.6 percent; number of demerits 5 times, or 3.5 percent; to these methods were added individual records of social habits, on which the habits a child has formed are indicated. This method was used by 4, or 2.8 percent, of the principals of the public school system.

17. General ability to do first grade work was used by 36.4 percent of all the 219 administrators as a factor for the admission of children to first grade; though 184, or 84.0 percent, report that some method is used in their schools to determine a child's general ability.

The different methods of such determination as listed and expanded by those reporting were checked 348 times by the administrators. Of the 348 times all methods were checked, the teacher's or principal's subjective judgment of readiness for first grade was checked 149 times, or 42.8 percent; judgment based on records

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of accomplishment 85 times, or 24.4 percent; judgment based on "readiness" tests 10 times, or 2.8 percent; judgment based on intelligence tests, physical records and other objective measurements, 100 times, or 28.7 percent; supervisor's judgment and chronological age, 4, or 1.0 percent. Combinations of the different methods are usually used by administrators to determine a child's ability to do first grade work.

18. The question as to what person or persons determine the child's general ability to do first grade work was checked 335 times by administrators; of these the teacher was checked 174 times, or 51.9 percent; the principal 105 times, or 31.0 percent; the parent 13 times, or 3.8 percent; the supervisor 28 times, or 8.3 percent. Other factors added, such as the state, board of education, etc., were checked 15 times, or 4.5 percent.

### *B. For Admission of Children to High First or to Second Grade*

1. The status of children in Grade I is determined largely by standard achievement tests, standard intelligence tests, non-standardized tests or examinations, and the estimates of teachers, nurses, doctors, principals, supervisors, parents, dentists, and psychiatrists.

2. These different methods to estimate the status of children in Grade I were checked 2,538 times. Of these methods teacher's estimate was checked as being used 1,702 times, or 68.4 percent. The estimate of teachers and others was checked as being used as a method 1,898 times, or 76.8 percent; standard achievement tests 142 times, or 5.7 percent; standard intelligence tests 102 times, or 4.0 percent; non-standardized examination 346 times, or 15.6 percent.

3. Standard achievement tests were used for determining reading status more than they were used for determining status in any other factor. Reading status, however, was determined by standard reading tests only 71 times, or 14.3 percent; by standard intelligence tests 47 times, or 9.4 percent; by non-standardized tests or examinations 89 times, or 17.9 percent; and by teacher's estimate 178 times, or 35.9 percent; and by the estimate of principal and supervisor 10 times or 2 percent.

## II. METHODS OF COMBINING THE RESULTS OF DIFFERENT MEASURES IN ORDER TO DETERMINE PROMOTION OR GROUP PLACEMENT

### *A. For Admission of Children to First Grade*

# Standards and Methods of Measuring Promotion Factors 57

METHODS	SUPT.	USAGE BY			TOTAL
		SUPR.	PRIN.	DIR.	
The combined judgment of teacher, principal, and supervisor, or superintendent...	3	14	2		19
Allowing the teacher to use her own judgment.....	6	4	4		14
Judgment.....	1				1
Teacher's judgment, chronological age, and mental age.....	1				1
Teacher's judgment, and standard and informal tests.....	1				1
Teacher's judgment 25 percent; intelligence tests and physical records 75 percent....	1				1
Teacher's judgment and child's ability to make social adjustment.....				1	1
Average of teacher's estimate and 2 mental tests.....		1			1
Talk with parents.....					
Parents' judgment, chronological age of 6, mental age of 6.....		1			1
Chronological age.....	1	1	2		4
Satisfactory balance of all factors.....		6		1	7
General estimate of child's ability.....	4	3			7
General estimate of child's ability, and normal mental age.....		3	1	1	5
General ability to do first grade work; mental age, and chronological age.....	2	1	1	1	5
Common sense estimate.....		1			1
Mental age of 6 and chronological age of 6.					
Use of mental age.....				3	3
Size and mental ability.....		1			1

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METHODS	USAGE BY				TOTAL
	SUPT.	SUPR.	PRIN.	DIR.	
Use of chronological age, mental age, and one month's trial on estimate of child's ability.....	I				I
Mental age 50 percent; chronological age 20 percent; all others 30 percent.....	I				I
Mental age 50 percent; chronological age 10 percent; physical maturity 20 percent; general ability 20 percent.....				I	I
Grouped in X Y Z as test results and ability indicate.....		I	2		3
Standard norms.....		I			I
According to scores.....		I			I
State law is followed.....		I			I
Kept in individual folders in superintendent's office.....		I			I
Comparison with standards of first grade..	2				2
Mean average.....	I				I
Failure in 2 major subjects and 1 minor or in 2 minor and 1 major fails a child.....		I			I
Child's improvement is marked by O=no improvement —=some improvement +=decided improvement					
Children who enter kindergarten when older and have not acquired desirable habits, also those who are not socially adjusted or are handicapped by ill health, are retained until a decided improvement is recorded. If child's mental age and chronological age are satisfactory and he is in good health, he is given an opportunity to demonstrate his ability in group assigned.....				I	I

## C.A. M.A. 1 2 3 4 Score

6-1 7-0 25 25 20 24 95 .....

Note. Use the rating scale given in *A Conduct Curriculum for Kindergarten and First Grade*, p. 122.

METHODS	USAGE BY				TOTAL
	SUPT.	SUPR.	PRIN.	DIR.	
Consider all measures in order of importance; e.g. (1) mental age, (2) chronological age and general health and emotional stability, (3) physical maturity. Promote accordingly .....				I	I
Use of record of child on chart which combines all factors is the concrete device used to determine readiness for promotion to first grade .....					

### Summary

Eighty administrators reported methods of using the results of the measures of a child to determine promotion or group placement. In these 80 statements a combined judgment of teacher and principal, together with that of supervisor, or superintendent, was mentioned 19 times, or 23.7 percent; a practice of allowing the teacher to use her own judgment was reported 14 times, or 16.2 percent. All other suggestions were stated less than 8 times or 10 percent.

### B. For Promotion to High First or Second Grade

METHODS	SUPT.	USAGE BY			TOTAL
		SUPR.	PRIN.	DIR.	
Conference between teacher and principal ..	4	3			7
Conference of supervisor and teacher .....		2			2
Conference of supervisor and teacher, principal and research director .....		3			3
Conference of supervisor, teacher, principal.		9	I	I	11
Teacher's judgment .....	4	5		3	12
The median, the teacher's judgment and principal's judgment .....		I			I
Average teacher's judgment and standard score test .....		I	I	I	3
Weight all measures about equally .....				I	I
Judgment and intelligence quotient .....				I	I



# 60 *Investigation of First Grade Admission and Promotion*

METHODS	USAGE BY			
	SUPT.	SUPR.	PRIN.	DIR. TOTAL
Intelligence quotient and teacher's judgment.....				I I
All testing 95 and above in one group; those below in another.....		I		I
Strongest 1/5 follow X courses; weakest 1/5 follow Z courses; all other Y courses.....		I		I
Children of high intelligence quotient placed in special group and given enriched curriculum rather than double promotion...		I		I
McCall scoring tabulation.....	3			3
High intelligence quotient scores, health and work habits.....			I	I
Comparison with standards and median of group.....	2			2
Find C. P.; arrange in order of rank; divide in three groups—Upper 35; Middle 30; Low 35.....		I		I
Teacher's estimate 1.2				
Intelligence quotient 2				
Health 1 = Norm.....		I		I
Social adjustment 2				
$\begin{array}{r} 4 \overline{)6.2} \\ 1.55 \end{array}$				
All measures reduced to the age scale units: various measures averaged.....		I		I
Chronological age, mental age, child's records shown in yearly charts, and definite achievements in subject matter.....		I		I
Reading 50 percent; language 20 percent; mental age 30 percent.....				I I
Mental age 50 percent; chronological age 20 percent; all others 30 percent.....	I			I
Consider all measures in order of importance: (1) mental age and ability to read, (2)				

METHODS	USAGE BY			
	SUPT.	SUPR.	PRIN.	DIR. TOTAL
number and social adjustment, writing, emotional stability, general health, and effort. Promote accordingly.....		1		1
Promote if health permits and parents consent.....		1		1
Observation average.....		1		
Check one against another.....	1	1		2
Chronological age overbalances all.....		1		1
Failure in a major and minor subject or two minors and 1 major fails a child.....		1		1
After considering all factors, place child where he will do most good.....		2		2
Promote on reading ability.....	1			1
Subjective judgment, objective judgment, and child's welfare.....		1		1
Child must meet passing standards in reading, number, and language.....	1			1
Must meet minimum requirements in all subjects, or all but one.....	1			1

### *Summary*

There is apparently little agreement among administrators regarding the best way to combine the results of different measures for the purpose of determining the promotion of children to high first grade and to second grade. Teacher's judgment ranks highest; and the combined judgment of teacher, principal, and supervisor, second. Probably in this second method the teacher's opinion counts for most in a large majority of cases.

### III. CHARTS AND TESTS FOR RECORDING OR RATING ACHIEVEMENTS OF KINDERGARTEN AND FIRST GRADE CHILDREN

1. Out of 219 replies to the questionnaire 25 supervisors and directors of laboratory schools sent charts for recording or rating

achievements of children, and 20 principals from the selected public school system sent charts to record the achievements of children, in health and social relations.

2. Thirteen of these charts for rating achievements of children analyzed the trait or traits about which information was desired; twelve listed the traits on which a rating was to be given but gave no analysis or definition of its meaning. The charts used by the principals of the selected public school gave a clear analysis of the meaning of the factor or trait to be rated.

3. A test for reading readiness,<sup>1</sup> an achievement test for kindergarten,<sup>2</sup> and a first grade entrance test<sup>3</sup> were reported.

## PART II: EVALUATION AND DISCUSSION OF FINDINGS

The administrators coöperating in this study checked methods as used to determine the status of children in the factors which were listed for promotion more often than they indicated that they used these factors for promotion. This fact probably indicates that a greater percent of administrators think the status of children in these factors is worth knowing, but consider that the factors themselves are not sufficiently correlated with success in school work to make them satisfactory bases for promotion.

### I. STANDARDS FOR ADMISSION TO FIRST GRADE

#### *Chronological Age*

It is exceedingly difficult to determine current practice as to what chronological age is required for admission. Of all the 219 administrators 71.6 percent reported that the chronological age at which children are normally admitted is 6 years or between 6 and 7 years; although 63 percent reported that they could vary the chronological age for admittance if the child was mentally above normal, and 43.8 percent reported that they could refuse a child admission to first grade if he was mentally below normal. These data together with the fact that 35.2 percent of the administrators reported some limit to the number of years a child may remain in kindergarten make the chronological age of entrance to first grade appear to vary so much that it is difficult to state the specific entrance age in common practice. This variation in chronological

<sup>1</sup> Berry and Rogers, *Reading Maturity Test*, Form A, Baltimore, Maryland.

<sup>2</sup> Rockwell, *Kindergarten Achievement Test*, Cleveland, Ohio (not published at the time of making report).

<sup>3</sup> Burr, *Seattle First Grade Entrance Class Test*.

age used may indicate that administrators are in a period of experimentation upon this factor which ultimately will lead to a change in emphasis given to it. There are no data based on scientific research which show that a child automatically becomes endowed with ability to do first grade work upon reaching any specific chronological age. A survey of the history of education makes evident the fact that when schools became free, school economic problems due to increases in enrollment and attendance disproportionately larger than increases in funds were solved by classification based on chronological age and reading ability. Usage made chronological age the basis for classification before scientific research revealed its weakness, and before the superior method of measuring children's maturity or learning capacity for successful achievement of first grade work by intelligence testing was perfected.

### *Mental Age*

A specific mental age for entrance to first grade was checked by only 51, or 23.1 percent, of the 219 different administrators. When checked such specific mental age ranged from 5 years to 7 years. Out of 219, only 42, or 18.7 percent, indicated the use of a mental age of 6 years. However, 130, or 59.3 percent, of the administrators reported that mental testing was used in their schools or school systems to determine mental age. The results of intelligence testing are used for school purposes other than admission; or it is possible that the administrators in this group are determining experimentally what mental age is necessary to do the work that a specific curriculum in a specific school or school system requires.

The mental age of 6 years used by 42 out of 51 administrators reporting the use of some mental age as an admission basis is the definite mental age—as research studies indicate—which evidences a readiness in children to accomplish successfully such a first grade curriculum as was organized in the schools in which these studies were made. This does not necessarily mean that students of research approve or disapprove of those curricula, of the class or grade organization, or of the materials of instruction in use for first grade children. It would rather seem to indicate that if the curriculum or materials for instruction and the grade organization must remain as they are, then a mental age of 6 years is necessary in these schools for children to cope successfully with it. What

curriculum materials are most effective for the growth of the child at any given chronological or mental age and any given intelligence level, what classification and what grade organization conduce to children's best development are all highly important but also quite different problems that should challenge practical administrators in education, and research workers in the field of educational administration.

The standard intelligence test was the method checked as being used to determine mental age. Eighteen different kinds of tests were reported by 130 administrators, but a decided preference for the Binet, Pintner-Cunningham, and the Detroit Kindergarten and First Grade Tests was evident.

Of the Binet-Simon test and its use Dickson<sup>4</sup> says: "At the time a child enters school, there is no other index of his ability that has shown itself so deserving of careful consideration as the Binet mental test. When used along with other criteria such as age, industry, accomplishment, health, etc., it makes the creation of effective working groups a much easier and surer task than is possible without it. It is a means of checking and refining the teacher's judgment which otherwise must depend upon external evidence that frequently leaves unfathomed the child's real ability."

The group tests attempt to perform the same sort of service in a more economical way. Even in cases where the same results cannot be obtained, group tests may still be justified as yielding results of value far in excess of their cost in money, time, and labor.

## II. METHODS USED AS A BASIS OF RATING

While only 20.7 percent of the administrators used physical maturity, health habits, general health, and emotional stability as factors for promotion, 68.8 percent indicated a method of measuring these items. The measurements of these traits indicated are entirely subjective except the measurements of height-weight and the X-ray photographs of anatomical status.

Teacher's estimate as the method used for the measurement of these traits outnumbers all others. It was checked for the four items 491 times, or 52.0 percent, out of 941; the judgment of specialists, such as physicians, nurses, and psychiatrists, was checked 188 times, or 29.9 percent; the judgment of parents 138

<sup>4</sup> Dickson, Virgil E., *Mental Tests and the Classroom Teacher*, Chap. 3, pp. 53, 54, 1924.

times, or 14.6 percent; and anatomical measurements 124 times, or 13.1 percent.

### *General Health*

As the method used to measure the child's status in general health, teacher's estimate and parent's estimate were checked 200 times, or 60.1 percent out of 332 checks. What value the teacher's and parent's estimate might have as a determination of a child's general health would depend upon what items were included for which the school assumed the responsibility of measuring. So specialized might be the desired data that the services of a well-trained physician, a dietitian, and a nurse would be needed to obtain them correctly; or they might be so simple that a teacher with, or even without, training could secure them. Which set of data are to be found should depend on their relative value to the child; and not on ease in obtaining them. To help any individual to get the best physical start in life is a matter of great importance; and ought to be most carefully considered in comparison with every other aid that the school can give him.

A study of teacher's estimate *vs.* the estimate of the specialist was made by Elliott <sup>5</sup> in the Detroit schools. His conclusions are:

The average large city, including Detroit, finds it impossible with its medical personnel to examine physically more than about 30 percent of its school children. The condition of the remaining 70 percent, except for a few of the worst cases (especially referred by the teachers, is unknown.

With a view of finding out with what degree of accuracy the teacher could make physical inspection of children, experiments under the direction of Professor C. M. Elliot of the Detroit Teachers College in coöperation with the Department of Health and its physical examining squads were performed in five schools covering 2116 children in 1921-22. The findings of the experiment show:

(1) On the basis of the medical examination given, the teacher made an error of 19.1 percent as compared with a present error of 70 percent. (Those children whom time did not allow the physician to examine.)

(2) The teachers found 41.3 percent of the children to be normal; thus eliminating a sufficient number to enable the examining physician to cover completely the public elementary school system each year.

(3) The amount of preparation for the work of the teachers is about one hour.

(4) The health inspection of the entire public elementary school system can be completed in a single morning. The committee believes that such health inspections by the teacher would

(1) Through a better knowledge of the physical condition of her children

<sup>5</sup> Elliot, C. M., *An Experimental Health Inspection of Detroit Elementary School Children by Teachers*, Detroit Department of Health Education, 1921-22.

enable her to deal more intelligently, fairly, and correctly with individual children.

(2) Both directly and indirectly increase the number of children who should have medical attention.

### *Physical Maturity*

The most common practice of administrators to determine the status of children's physical maturity was found to be teacher's judgment. The measure used most often to determine anatomical maturity was the height-weight index.

The adequacy, the validity, and the value of anatomical measurements are indicated in the following statements:

"If measurements on the physical growth of children are to be scientific and of educational value, they must be taken consecutively at least semiannually, by trained observers, with standardized technique."<sup>6</sup>

"Throughout childhood the weight curve continues to be the surest indication of proper growth . . . All children should be weighed once a month."<sup>7</sup>

"It may be stated as a physiological principle that a body of a certain height requires a certain weight to sustain it, and the most significant test of a child's condition is the relation between his weight and his height."<sup>7</sup>

"Certain significant correlations gathered under rigid experimental conditions for 120 girls six to twelve years of age are:

Correlation of mental age with ossification ratio . . . .	.016
Correlation of mental age with height . . . . .	.34
Correlation of mental age with weight . . . . .	.39
Correlation of mental age with dentition . . . . .	.12

One must accept the conclusion that there are low partial correlations between mental age and the commonly accepted indices of physiological and anatomical development."<sup>8</sup>

Woodrow, Lowell, Baldwin and Stecher, Freeman and Carter, and Dearborn and Prescott have accepted skeletal development as the best index of anatomical age, and the ossification process of the wrist as the most reliable measure of skeletal growth.

"The student should be warned against accepting any single

<sup>6</sup> Baldwin and Stecher, *The Psychology of the Pre-school child*, Chap. II, pp. 26, 27, 1924.

<sup>7</sup> Emerson, Wm. R. P., *Nutrition and Growth in Children*, 1922.

<sup>8</sup> Abernethy, Ethel M., "Correlations in Physical and Mental Growth," *Jour. Ed. Psychology*, Oct., 1925.

measure of anatomical or physiological development as necessarily indicative of a parallel mental development. A single measure of growth, which is easily obtainable and which would suffice for other types of measures, has not yet been found.

"These statements indicate the height-weight index, a measure important and generally utilized in considering anatomical maturity. There is, however, disagreement among students of research regarding its significance either alone or with other physical measurements to indicate a parallel mental development."<sup>9</sup>

### *Emotional Stability*

The methods listed for the rating of emotional stability were teacher's qualitative estimate which was checked 132 times, or 85 percent out of 154 checks; and the rating plan or card which was checked by 18, or 11.6 percent; while other estimates were checked 4 times, or 2.4 percent. It is apparent that common practice in estimating the status of children's emotional stability is teacher's qualitative estimate.

The method used by Gates<sup>10</sup> to determine the emotional status of children was teacher's judgment with an analysis of emotional maturity on a rating scale to guide this judgment.

In a survey made by Courtis<sup>11</sup> of the emotional tendencies and behavior of over 3000 children, "teachers participating in the survey were furnished with detailed descriptions of the way children behave in a number of emotional situations, and were asked to record their observations and judgments in regard to each child in their care. More than one teacher rated most of the children. These ratings were summarized and reduced to an index figure which expressed crudely, but definitely, the degree of emotional control developed by a given child. These indices were used to trace the effect of emotional control on success."

To secure an accurate determination of the child's status as to emotional stability, these two authorities in educational research found it necessary to formulate a rating scale to guide the judgment of teachers. Both investigators publish in their studies the rating cards which the teachers used in making their judgments.

<sup>9</sup> Pechstein, L. A. and Jenkins F., *Psychology of the Kindergarten-Primary Child*, Chap. IV, 1927.

<sup>10</sup> Gates, Arthur I., "The Nature and Educational Significance of Physical Status and of Mental, Physiological, Social, and Emotional Maturity," *Jour. Ed. Psychology*, September, 1926.

<sup>11</sup> Courtis, Stuart A., *Why Children Succeed*, Appendix, 1925.



The validity of any method used at present to show the effect of emotional factors on success is expressed by Courtis<sup>12</sup> in the following statement:

"The emotional and social factors undoubtedly produce marked effects upon success. The residual errors of prediction of Stanford scores were correlated with the results from the emotional and social surveys, but the correlations were practically zero. In my judgment, this means, *not* that these factors do not influence a child's success at school, but that they have no general or uniform influence. Proof of their effects is to be derived from analytical study of individual variations from predicted values. Methods of correction for such specific factors must be discovered before the true relations between the general factors can be determined."

#### *Children's Ability to do First Grade Work*

The most common practice to determine children's ability to do first grade work is to combine the teacher's or principal's subjective judgment, and the teacher's judgment based on records. Intelligence testing, the only available objective method of determining children's readiness for first grade, was used about one-fourth as many times as the subjective methods.

The relative importance of measures used to determine children's ability to do first grade work depends on the specific objectives of the kindergarten and first grade curricula. If success in first grade is dependent upon the child's ability to read and to accomplish a definite assignment of work, then those traits—physical, mental, social, emotional, and intellectual—which make the prescribed accomplishment possible need to be selected and corresponding measures need to be constructed. That we have failed to do this is evident from the report of the committee on the "Investigation on Readiness for Reading"<sup>13</sup> to which reference has already been made. This study shows that of 590 first grade teachers 504, or 90 percent, reported that 20 percent of the children entering school September 25, 1925, were not ready for reading.

A study of kindergarten achievements should show that they lead to first grade readiness. The importance of objective meas-

<sup>12</sup> Courtis, Stuart A., *Why Children Succeed*, Chap. VIII, 1925.

<sup>13</sup> *Pupils' Readiness for Reading Instruction Upon Entrance to School*, U. S. Bureau of Education, Leaflet No. 23.

ures for this purpose is evident. A study<sup>14</sup> of kindergarten achievements organized under Bonser's four educational objectives—practical efficiency, health, citizenship, and leisure—from kindergarten and first grade curricula, points the way to an analysis of kindergarten accomplishment. Out of 110 achievements listed, 91 selected kindergarten and first grade teachers chose the 50 achievements which in their judgment seemed essential for accomplishing first grade work. A rating card based upon an analysis of these achievements would be a crude measure of the status of children's ability to do first grade work, and its perfecting would make a definite contribution.

Research studies<sup>15</sup> reporting the value of intelligence testing and the importance of a mental age of 6 for success in any first grade in which there is a specific reading curriculum to accomplish have already been referred to in this study. The value of supplementing teacher's estimate with intelligence testing is pointed out in the following statements:

"Teacher's estimate is a valuable check on standardized intelligence tests and the standardized tests are valuable in helping the teacher to make a deeper study of variation in data and learn to guard against snap judgments.

"A teacher cannot rightly judge a child merely by what he does. She must take into account his ability and the effort he must put forth to produce results. Hence a method is necessary for rating accomplishment in terms of ability to accomplish. Intelligence tests refine teacher's judgments and she is stimulated to make a study of contradictory data."<sup>16</sup>

### III. METHOD OF COMBINING MEASURES

When asked to state the method of combining or using the different measures in order to determine the promotion or group placement of the children in the kindergarten only 87, or 39.5 percent, of the administrators made a reply. The most common practice of those replying (19, or 21 percent) indicated that teacher, principal, and supervisor or superintendent made a combined judgment, probably on the basis of the status of the child

<sup>14</sup> Reed, Mary M. and Harbeck, Irene, *The Rank of Kindergarten Achievements Important for First Grade Readiness*. (Unpublished).

<sup>15</sup> Terman, Lewis M., *The Intelligence of School Children*, Chap. V, 1919.

<sup>16</sup> Dickson, Virgil E., *Mental Tests and the Classroom Teacher*, 1924.

in the different measures. The method of second highest frequency (14 out of 87, or 16 percent) was to allow the teacher to use her own judgment, no doubt in the light of the results of different measurements. Other reported methods or uses included a mere filing of the records, as, for example, keeping them in individual folders in the superintendent's office; a more inclusive method in which the use of records of children on a chart which combines all factors is the concrete device used to determine readiness for promotion to first grade; and also the use of the following mechanical device: mental age 50 percent; chronological age 10 percent; physical maturity 20 per cent; general ability 20 percent.

There is practically no agreement among administrators as to the combination of different measures for the purpose of determining promotion or grouping of children in the first grade. Of the 219 administrators 54, or 24.6 percent, suggested 34 different methods of using the measurements which showed the status of children in various factors. The use suggested most frequently was for conferences of the teacher and the supervisor, together with the principal, or the research directors.

The variation in the combining of the results of measures which were suggested for promotion or class grouping is indicated by such answers as: (1) Promote if health permits and parents consent; (2) Child must meet passing standards in reading, number, and language; (3) McCall scoring tabulation.

The methods used in combining the different measures show no accepted practice. Subjective judgment is used more extensively than available objective methods. It would, however, seem desirable in order to determine a child's readiness for first grade to know not only the abilities and capabilities which he possesses but in what amounts he possesses them.<sup>17</sup>

### *Summary*

If a child's status in kindergarten learning is to be determined by the number of desirable changes brought about in the child because of instruction, then measurements of his status should be made by methods which are objective and accurate. This summary reviews the limitations of objective measurements in the kindergarten together with the differences in the methods of measuring commonly used by administrators and those advocated by students of research.

<sup>17</sup> McCall, William A., *How to Measure in Education*. Chan. I 1922

1. There is virtually no common practice or device in the use of the different measures of the child either singly or in combination. Both students of research and some administrators reporting indicate that the knowledge given by the different measures makes easier and surer the creation of effective working groups, and the selection of methods and materials for instruction.

2. Although chronological age is the most commonly used entrance specification, there is such variability in the chronological age specified for first grade that it is difficult to state any age for entrance that is not modified in practice by some other factor. The findings of scientific research do not define any chronological age as certain to indicate readiness to do first grade work. Rather such findings make evident the highly varying abilities of children at any given age.

3. The use of a mental age of 6 years for admission to first grade is the accepted practice of the students of research as well as of most of the 51 administrators who reported mental age as a factor influencing promotion. This age is determined in the common practice of administrators by testing; preferably by the Binet individual test or by Pintner-Cunningham or Detroit group tests. These tests are generally accepted as satisfactory by students of research.

4. To determine the child's status in general health, teacher's estimate and parent's judgment are more often used in common practice than an examination by medical experts. The report of the findings of an experiment on teacher's estimate after training in the examination of children showed an error of 19.0 percent in the measurement of the particular physical traits for the measurement of which the school assumed responsibility.

5. The most common practices to determine a child's physical maturity are teacher's judgment and height-weight measurement. The findings of students of research seem to indicate that a teacher's judgments of physical maturity will be valid and of educational value according to the training she has had to make accurate physical measures and to interpret them. Height-weight is generally utilized by research students as a measure of anatomical and physical maturity. Of the four measures listed in the questionnaire it showed the highest correlation with mental maturity.

6. The most common practice of teachers in determining the status of children's emotional stability reported by the administra-

tors is teacher's qualitative estimate. This practice differs somewhat from the method used by students of research. The methods used by both are subjective, but in the method used by students of research there is an analysis of children's emotional tendencies in rating scale form. The rating scale provides a definition of the meaning of the behavior which is to be rated and furnishes a definite guide for evaluating it. In the judgment, however, of one research worker of note no method of correction is now available to isolate the effect of the emotional factor on school success.

7. To determine children's ability to do first grade work, common practice utilizes teacher's or principal's subjective judgment more often than any other measure. The findings of students of research show the importance of supplementing this judgment with the requirement of a mental age of 6, to be ascertained by the intelligence test. Their advice should be considered in the light of the studies which reported that 20 percent of the children admitted to first grade are not ready to read;<sup>18</sup> and that reading is responsible for 99.1 percent of failure in the first grade in cities, and for 95.0 percent of failure in the first grade in country schools.<sup>19</sup>

#### I. METHODS TO DETERMINE THE STATUS OF CHILDREN IN FIRST GRADE

To determine the status of first grade children in the factors used for promotion, four different methods were listed on the questionnaire, namely, standard achievement tests, standard intelligence tests, non-standardized tests, and teacher's estimate. The method most common in practice to determine the status of children in the different factors listed was teacher's estimate which was checked 1,702 times out of 2,538, or 67.0 percent. Non-standardized tests or examinations received 396 checks, or 15.6 percent; standard achievement 142 times, or 5.7 percent, and intelligence tests 102, or 4.0 percent. To the four listed methods administrators added the estimates of nurse, doctor, principal, supervisor, dentist, parent, and psychiatrist; also daily records, individual observation, and group criticism. The methods that were added by different administrators were checked 196 times out of 2,538, or 7.9 percent.

<sup>18</sup> *Pupils' Readiness for Reading Instruction Upon Entrance to School*, U. S. Bureau of Education, Kindergarten Leaflet, No. 23.

<sup>19</sup> Percival, Walter P., *A Study of the Causes and Subjects of School Failures*, 1927.

### *1. Teacher's Estimate*

Teacher's estimate, which was checked 1,702 times, or 68.4 per cent, out of 2,538 times, was the method used most often to determine the child's status in the various factors in first grade.

The worth of teacher's estimate as a measure of a child's status in reading or in any other factor considered important for promotion is likely to depend on the analysis she makes of the factor and the inerrancy of her judgment of the different elements. For instance, Gates<sup>20</sup> says, "that there are many types of reading abilities, that an individual may be competent in some and not in other forms of reading, and that each type is best developed by instruction directed specifically to it—[these facts] have a clear bearing on the problem of measuring reading ability and of following up the results revealed."

Equally complex are the abilities which combine to make for success in social studies, and only by providing special training and by measuring the specific abilities in the light of a standard is a teacher likely to be successful in making judgments of the status of children in different factors.

Teacher's estimate is not always correct in determining a child's ability to progress. "Great assistance is furnished the first grade teacher from the results of testing. Mere personal opinion is not always safe, for there are children brilliant in a general sense but dull in a technical sense. Limited experience often makes a child appear dull."<sup>21</sup>

Teachers' estimates are considered valuable and are utilized by research workers—Gates, Courtis, Dickson, and Terman. In the judgment of such workers, however, these estimates were guided by rating scale analyses and their estimates were supplemented by every available standardized test.

"The importance of supplementing teacher's estimate with any standardized achievement test is to be commended. Tests at present do not test all aspects of reading ability or a child's social or emotional maturity for reading."<sup>21</sup>

Teacher's estimate is a valuable check on standardized intelligence tests and the standardized tests are valuable in helping the

<sup>20</sup> Gates, Arthur I., "A Series of Tests for the Measurement and Diagnosis of Reading Ability 3 to 8," *Teachers College Record*, September, 1926.

<sup>21</sup> Dawson, Chas. D., "Classification of Kindergarten Children from First Grade by Means of the Binet Test," *Jour. Ed. Research*, p. 412. December, 1922.

teacher to make a deeper study of variations in data and to learn to guard against snap judgments.<sup>22</sup>

"The trouble with the observational method is its lack of universal standard of judgment. One observer may use a high, another a low standard of comparison.

"The method of personal estimate is much better than the method of external signs (phrenology) but to be reliable it must be supplemented by a method which is objective."<sup>23</sup>

## 2. *Non-Standardized Tests or Examinations*

Non-standardized tests or examinations which received the second highest rating as a measure to determine the status of children in first grade are of two kinds: the traditional subjective type and the objective though non-standardized type.

A study<sup>24</sup> has been made of the differences in values assigned by different teachers to the same pieces of work when using the traditional subjective type of examination. A summary of findings follows:

"This investigation has established two conclusions: first, that teachers differ enormously in evaluating the same pieces of work in terms of the ordinary percentage scale; and, second, they differ as much in one subject matter as in another.

"Four possible factors may be mentioned as causes: (1) differences in the standard of severity or leniency of different schools; (2) differences in the standards or leniency of different teachers; (3) differences in credit or penalty assigned by different teachers to any given fact or error in a piece of work; (4) minuteness of the discrimination between successive steps of merit or quality in a given scale of qualities."

The use of non-standardized objective tests in reading and other subjects is sanctioned in the following comments:

"Both types of tests (standardized and informal) are valuable, but each type has its own characteristics and its specific function. . . . Both types of tests disclose individual differences and show the necessity for provisions which take such differences into account. . . . The true function of informal tests is best served when the tests are made to suit the material and the situations in

<sup>22</sup> Dickson, Virgil B., *Mental Tests and the Classroom Teacher*.

<sup>23</sup> Terman, Lewis M., "Tests of General Intelligence," *Psychological Bulletin*. May 1918.

<sup>24</sup> Starch, *Educational Psychology*, Chap. XXII, 1921.

which they are to be used. Setting up objectives or purposes and testing for the outcomes of instruction will encourage a critical and professional attitude toward the whole reading problem and give a basis for the analyses of learning and teaching upon which the improvement of educational procedures depend.”<sup>25</sup>

The practice exercises and checks on silent reading in primary grades used in Lincoln School are samples of the non-standardized objective tests in reading. The Lincoln School investigators reported that with the use of this material “The total months of growth in the entire group of 21 pupils during the three and a half month interval was 309 months. The average growth per pupil during 3.5 months was 14.7 months.”<sup>26</sup> This material was organized on the basis of definite reading objectives and the needs and interests of the children concerned and was an informal but definite check or measure of the child’s achievement.

### *3. Standard Achievement Tests*

The paucity of standardized tests to measure the status of children in first grade achievement in subjects other than reading does not indicate any lack in the importance of objective measurement in these traits. Reading having been traditionally set up as the primary objective of the first grade, tests for other achievements have been delayed until reading tests were perfected. The subtleness of other traits of early learning makes construction of tests to measure them more difficult. The series of tests lately published by Gates for the measurement and diagnosis of reading ability in grades 3 to 8 based on objectives that reach to the earliest beginnings of reading is indicative of progress in reading tests and is a hopeful sign that similar advance will shortly be made in measuring other desirable abilities.

In order to determine the fruitfulness or wastefulness of methods of learning and teaching reading or other school subjects it is necessary to evaluate the achievements of pupils as accurately as possible. The procurement of test scores in first grade performance is important, and will be more pertinent to pupil growth when the curriculum of this grade becomes adjusted to the capaci-

\* *Twenty-fourth Year Book, National Society for the Study of Education*, Part I, 1925.

\* Zirbes, Laura; Keeler, Katherine; Minor, Pauline; *Practice Exercises and Checks on Silent Reading in the Primary Grades*.



ties, interests, and needs of the children and when those achievements important for success are more accurately determined.

Achievement tests in reading were used by two-thirds of the directors of laboratory schools. If the practice of these schools is indicative of what is found best after organized experimentation there is sufficient reason to believe that achievement tests are valuable in supplementing teacher's estimate to determine children's status in first grade reading.

#### *4. Mental Testing*

The value of mental or intelligence testing to predict achievement of first grade children is evidenced in the following:

"A mental test is useful in predicting achievement over a period of the first five months of school.

"The predictive values of the mental test investigated are found to be much better than chance.

"The over-age children in this group are found to be variables.

"The prediction is more consistent in the upper and lower limits of the distribution.

"The prediction of a mental test showing correlation coefficient of .63 with achievement is sufficiently valid in this instance to prophesy decile positions within two deciles, after a period of five months." <sup>27</sup>

#### *Summary*

The successful operation of a school demands an accounting of the work of its pupils. If standards are set at different points in a child's educational journey and if the child's progress must reach these standards at specified times an accurate measurement of his status is important. Such a statement should be doubly emphasized if the organization of the school demands a retracing of the child's steps over a large unit of work when he fails to meet the standards set.

1. Common practice and the findings of students of research are in agreement that teacher's estimate is valuable in determining the status of children in first grade. But students of research would (a) guide this estimate by rating scales and (b) supplement this estimate by achievement and intelligence testing.

2. Knowledge of the types of non-standardized examinations or

<sup>27</sup> Cunningham, Bess V., *The Prognostic Value of a Primary Group Test*, 1923.

tests used in the schools reporting was not secured from the questionnaire data. The results, however, of the traditional type of non-standardized examination or testing whose making and marking are wholly dependent on the subjective judgment of teachers have been found to vary so extensively when the same examinations have been evaluated by different teachers, or by the same teachers at different times, that such examinations are not considered a fair measure of a child's status. Non-standardized tests if objective are none the less of value (*a*) because the tests may be made to suit the material and situations in which they are to be used, and (*b*) because the personal bias of the teacher need not be involved.

3. Achievement tests, while not used extensively in the practice of the administrators reporting, are used in laboratory schools, especially to get a child's status in reading. The importance of supplementing teacher's judgment with standardized tests is emphasized by students of research.

4. Intelligence testing to determine the status of children has been found of value by students of research (*a*) to supplement other measures in order to discover whether the child is working to his maximum capacity, and (*b*) to predict his probable success in first grade.

On pages 78 to 83 inclusive the data discussed in this chapter are presented in tabular arrangement. Material relating to the use of chronological age and mental age as factors in the admission of children to first grade is shown in Tables XXIA and XXIB. Tables XXIIA, XXIIB, XXIII, XXIV, XXV, and XXVI deal respectively with methods of rating general health, physical maturity, emotional stability, health habits, general ability, and general conduct.

In Table XXVII is discussed the use of the judgment of some one person, such as teacher, parent, psychiatrist, and so on, to determine general ability; with data indicating the relative extent of the practice, as reported by each of the four groups of administrators. Table XXVIII shows the number of times the administrators responding to the questionnaire reported themselves as using various methods to determine the status of first grade children in curriculum achievement, physical fitness, personality traits, and general intelligence. These methods include tests, school records, group criticism, and estimates of teachers and parents.

TABLE XXI-A  
FOUR GROUPS OF ADMINISTRATORS CLASSIFIED ACCORDING TO USE OF CHRONOLOGICAL AGE AND MENTAL AGE  
FOR THE ADMISSION OF CHILDREN TO FIRST GRADE

ADMINISTRATORS USING ADMISSION AGES FOR CHILDREN	CHRONOLOGICAL AGE						MENTAL AGE				
	4-5	5-6	6-7	7-8	No Report	Total	5-6	6-7	7-8	No Report	Total
Superintendents .....	0	17	63	5	5	90	4	9	1	76	90
Supervisors .....	2	25	65	1	1	94	4	24	0	66	94
Principals .....	0	3	17	0	0	20	0	2	0	18	20
Directors .....	0	3	12	0	0	15	0	7	0	8	15
Total .....	2	48	157	6	6	219	8	42	1	168	219
Percent .....	.9	21.5	71.6	2.7	2.7	99.4	3.7	19.1	0.4	76.7	99.9

TABLE XXI-B

	IF M. A. STANDARD IS ABOVE				IF M. A. STANDARD IS BELOW			
	Yes	No	No Report	Total	Yes	No	No Report	Total
Superintendents .....	41	43	6	90	28	54	8	90
Supervisors .....	63	27	4	94	48	41	5	94
Principals .....	20	0	0	20	8	11	1	20
Directors .....	14	1	0	15	12	3	0	15
Total .....	138	71	10	219	96	109	14	219
Percent .....	63.0	32.4	4.5	99.9	43.8	49.7	6.3	99.8

TABLE XXII-A

NUMBER OF EACH OF FOUR GROUPS OF ADMINISTRATORS USING SOME  
METHOD TO RATE GENERAL HEALTH

A = Teacher's estimate  
B = Parent's judgment  
C = Medical record

D = Number checking one or more methods  
E = Number not checking any method

ADMINISTRATORS BY GROUPS	A	B	C	TOTAL	D	E	TOTAL
Superintendents .....	43	23	33	99	74	16	90
Supervisors .....	57	23	71	151	83	11	94
Principals .....	10	6	20	36	20	0	20
Directors of Laboratory Schools .....	10	8	8	26	15	0	15
Total .....	120	60	132	312	192	27	219
Percent .....	36.1	24.0	39.7	99.8	87.6	12.3	99.9

TABLE XXII-B

NUMBER OF EACH OF FOUR GROUPS OF ADMINISTRATORS HAVING SOME  
METHOD TO DETERMINE PHYSICAL MATURITY

A = Teacher's estimate  
B = Parent's judgment  
C = Observation of dentition  
D = Height-weight index  
E = X-ray of carpal bones or dentition

F = Medical records  
G = Nurse's judgment  
H = Number checking one or more methods  
I = Number not checking any method

ADMINISTRATORS BY GROUPS	A	B	C	D	E	F	G	TOTAL	H	I	TOTAL
Superintendents	42	20	7	40	0	3	0	112	69	21	90
Supervisors ...	56	22	25	55	3	0	1	162	74	20	94
Principals ....	10	6	10	19	1	0	1	47	20	0	20
Directors of Laboratory Schools .....	13	6	5	7	1	0	0	32	15	0	15
Total ....	121	54	47	121	5	3	2	353	178	41	219
Percent ....	34.2	15.2	13.3	34.2	1.4	0.8	0.5	99.6	81.3	18.7	100.0

TABLE XXIII

NUMBER OF EACH OF FOUR GROUPS OF ADMINISTRATORS USING SOME  
METHOD TO RATE EMOTIONAL STABILITY

A = Teacher's quantitative estimate

B = Rating plan or card

C = Test;

D = Supervisor's estimate

E = Psychologist's estimate

F = Number checking one or more methods

G = Number not checking any method

ADMINISTRATORS BY GROUPS	A	B	C	D	E	TOTAL	F	G	TOTAL
Superintendents ...	46	1	0	0	0	47	47	43	90
Supervisors .....	56	5	2	1	1	65	57	37	94
Principals .....	14	3	0	0	0	17	15	5	20
Directors of Laboratory Schools ....	16	9	0	0	0	25	13	2	15
Total .....	132	18	2	1	1	154	132	87	219
Percent .....	85.7	11.6	1.2	0.6	0.6	99.0	60.2	39.6	99.8

TABLE XXIV

NUMBER OF EACH OF FOUR GROUPS OF ADMINISTRATORS USING SOME  
METHOD TO RATE CHILDREN'S HEALTH HABITS

A = Teacher's rating on point scale

B = Mark on percentage basis

C = Scorings—Sometimes, Often, Never

D = Height-weight

E = Record sheet

F = Number checking one or more methods

G = Number not checking any method

ADMINISTRATORS BY GROUPS	A	B	C	D	E	Total	F	G	Total
Superintendents ..	18	15	5	1	0	39	39	51	90
Supervisors .....	21	2	12	0	0	35	35	59	94
Principals .....	3	0	5	0	10	18	18	2	20
Directors of Laboratory Schools .	5	1	3	0	0	9	9	6	15
Total .....	47	18	25	1	10	101	101	118	219
Percent .....	46.5	17.8	24.7	.9	9.9	99.8	46.1	53.8	99.9

TABLE XXV

METHODS USED BY EACH OF FOUR GROUPS OF ADMINISTRATORS TO DETERMINE GENERAL ABILITY

A = Teacher's or principal's subjective judgment

B = Judgment based on records

C = Judgment based on readiness tests

D = Judgment based on intelligence tests

E = Supervisor's judgment

F = C. A.

G = Number reporting

H = Number not reporting

ADMINISTRATORS BY GROUPS	A	B	C	D	E	F	TOTAL	G	H
Superintendents ...	48	22	2	20	0	0	92	66	24
Supervisors .....	73	41	8	58	3	0	183	85	9
Principals .....	17	15	0	12	0	1	45	20	0
Directors of Laboratory Schools ....	11	7	0	10	0	0	28	13	2
Total use of methods ...	149	85	10	100	3	1	348	184	35
Percent .....	42.8	24.4	2.8	28.7	.8	.2	99.7	84.0	15.9

TABLE XXVI

NUMBER OF EACH OF FOUR GROUPS OF ADMINISTRATORS USING SOME METHOD TO RATE GENERAL CONDUCT

A = Teacher rating on point scale

B = Mark on percentage basis

C = Number of demerits

D = Individual records of social habits

E = Number reporting

F = Number not reporting

ADMINISTRATORS BY GROUPS	A	B	C	D	TOTAL	E	F	TOTAL
Superintendents .....	17	37	2	0	56	56	34	90
Supervisors .....	43	12	2	0	57	52	42	94
Principals .....	11	1	1	4	17	17	3	20
Directors of Laboratory Schools .....	8	1	0	0	9	8	7	15
Total .....	79	51	5	4	139	133	86	219
Percent .....	56.9	36.6	3.5	2.8	99.8	60.7	39.2	99.9

TABLE XXVII

NUMBER OF EACH OF FOUR GROUPS OF ADMINISTRATORS USING JUDGMENT OF SOME PERSON TO DETERMINE GENERAL ABILITY

A = Teacher

B = Parent

C = Principal

D = Supervisor

E = Superintendent

F = Psychiatrist, Psychologist, Physician

G = C. A.

H = Test

I = Number reporting

J = Number not reporting

ADMINISTRATORS BY GROUPS	A	B	C	D	E	F	G	H	TOTAL	I	J	TOTAL
Superintendents .	60	1	33	7	2	1	1	0	105	72	18	90
Supervisors .....	82	9	51	17	0	3	2	3	167	89	5	94
Principals .....	20	1	15	2	0	0	0	0	38	20	0	20
Directors of Laboratory Schools	12	2	6	2	0	3	0	0	25	13	2	15
Total .....	174	13	105	28	2	7	3	3	335	194	25	219
Percent .....	51.9	3.9	31.3	8.4	0.6	2.1	0.9	0.9	100.0	88.5	11.4	99.9

TABLE XXVIII  
NUMBER OF TIMES ADMINISTRATORS USED VARIOUS METHODS TO DETERMINE STATUS OF CHILDREN IN  
FIRST GRADE IN DIFFERENT FACTORS

A = Standard Achievement Tests  
B = Standard Intelligence Tests  
C = Non-standardized Tests  
D = Teacher's Estimate  
E = Nurse's Estimate  
F = Doctor's Estimate  
G = Principal's Estimate  
H = Supervisor's Estimate  
I = Dentist's Estimate  
J = Parent's Estimate  
K = School Approval  
L = Group Criticism  
M = Daily Records  
N = Psychiatric Estimate  
O = Individual Observation by Specialist

PROMOTION FACTORS	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Total
Ability to Read .....	71	47	89	178	0	0	2	8	0	0	0	0	0	0	1	396
Ability in Number .....	18	17	61	128	0	0	0	3	0	0	0	1	0	0	1	229
Ability in Language .....	11	17	43	144	0	0	0	3	0	0	0	1	0	0	1	220
Ability in Art .....	2	2	11	93	0	0	0	2	0	0	0	1	0	0	1	112
Ability to Adjust Socially ..	1	5	8	111	0	0	1	2	0	0	0	1	1	0	1	131
Ability in Nature Study .....	0	0	11	84	0	0	0	1	0	0	0	0	1	0	1	98
Ability in Music .....	0	1	15	97	0	0	0	5	0	0	0	0	1	0	1	120
Ability in Writing .....	21	2	24	108	0	0	1	2	0	0	0	0	0	0	1	159
Ability in Spelling .....	18	2	37	93	0	0	0	1	0	0	0	0	0	0	1	152
Health Habits .....	0	0	8	110	10	5	0	1	0	0	0	0	3	0	1	140
Effort .....	0	8	6	123	0	0	0	2	0	0	1	0	2	0	1	143
General Conduct .....	0	0	7	121	0	0	0	2	0	0	1	0	1	0	1	133
Physical Maturity .....	0	0	9	108	20	24	0	1	0	0	0	0	1	0	1	164
Emotional Stability .....	0	0	6	102	3	3	0	2	0	0	0	0	1	1	1	119
General Health .....	0	0	11	102	32	19	0	1	1	2	0	0	1	0	1	170
General Intelligence .....	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	2
Total .....	142	102	346	1702	65	51	4	36	3	2	2	4	12	1	16	2488
Percent .....	5.7	4.0	15.6	67.0	2.6	2.0	0.1	1.4	0.1	0.0	0.0	0.1	0.5	0.0	0.6	99.7



## CHAPTER IV

### MINIMUM REQUIREMENTS IN READING AND METHODS OF MEASUREMENT

#### PROBLEMS

1. What are the minimum requirements in reading (a) for the promotion of children from low first to high first grade, and (b) for the promotion of children from high first to second grade?
2. What standard achievement tests determine an achievement score for the promotion of first grade children? To what extent are record or rating cards used to determine the achievements of children?
3. Are minimum requirements rigidly adhered to?

#### PROCEDURE

The requirements in reading for the promotion of children from low first to high first and from high first to second grade were obtained from superintendents, supervisors, and principals of public schools, and directors of private schools by requesting them to list the minimum number of primers, first readers, supplementary readers, and second readers, also to list the minimum number of words, phonograms, and phonetic families to be recognized and recalled. The data were organized and summarized under the following captions:

The number of administrators who

- (1) had no minimum requirement for promotion that children must attain; that is, specifically stated "no requirement" on the questionnaire.
- (2) had no definite minimum requirement; that is, the requirement varied with different groups or with the needs of children.
- (3) had definite minimum requirements; that is, a fixed number of books, words, and phonetic elements to be accomplished within a term.
- (4) had as minimum requirements those phonetic elements in

the basal primer or first reader which were used in the school or school system.

(5) had as phonetic minimum requirements knowledge of consonants and the vowels.

Administrators were asked to list the tests which they used to measure achievements of children in first grade and to indicate the score required for promotion. They were also requested to report the use of any card to record or to rate the achievements of children in social habits, nature study, art, music, writing, spelling, or language.

A request was also made for a report as to whether the minimum requirements were rigidly adhered to. This question was to be answered either Yes, or No.

## PART I: SUMMARY OF FINDINGS

### I. MINIMUM REQUIREMENTS IN READING

#### *A. For Promotion from Low First to High First Grade*

1. Of the 219 administrators replying to the questionnaire, 66, or 30.1 percent, made no report on the minimum primer requirements for promotion from low first grade to high first grade. Of the 153 replying, 41, or 26.7 percent, reported that there was no minimum requirement of primers for promotion of children from low first to high first; 17, or 11.1 percent, reported an indefinite minimum requirement; and 95, or 62.0 percent, reported a definite minimum requirement ranging from less than one complete primer to ten primers, the median being 2.31 primers.

2. There were 142 administrators who reported on the first reader requirements for promotion from low first to high first grade. Of these, 90, or 63.3 percent, reported no minimum requirement of first readers for promotion of children from low first to high first grade; 17, or 11.9 percent, reported an indefinite minimum requirement, and 35, or 24.6 percent, reported a definite minimum requirement ranging from one to five first readers, the median of which was 1.80 first readers.

3. Of the 135 administrators reporting on the minimum number of supplementary readers required for promotion from low first to high first, 70, or 51.7 percent, reported that there was no requirement of supplementary readers for promotion; 24, or 17.7 percent, reported an indefinite minimum requirement; and 41,

or 30.3 percent, reported a definite minimum requirement of supplementary readers ranging from 1 to 12 books with a median of 2.5 books. In addition to the minimum requirements in reading a minimum number of words, phonograms, and phonetic families is sometimes required for the promotion of children in the first grade.

4. Of the 118 administrators reporting on minimum requirements of words to be recognized, 61, or 51.6 percent, reported that there was no minimum requirement of word recognition for the promotion of children from low first to high first; 17, or 14.5 percent, reported an indefinite minimum requirement; 8, or 6.8 percent, reported as requirement the words in the basal primer; and 32, or 26.2 percent, reported a definite minimum requirement ranging from 50 to 850 words, the median of which was 168.7 words.

5. Of the 123 administrators reporting on the minimum requirements of phonograms recognized, 76, or 61.7 percent, reported no minimum requirement; 12, or 9.7 percent, reported an indefinite minimum requirement of the recognition of phonograms; 5, or 4.0 percent, reported a requirement of the initial consonants and the vowels; and 22, or 17.8 percent, reported a definite minimum requirement ranging from 6 to 62 phonograms with a median of 25.0 phonograms.

6. Of the 120 administrators who reported on the minimum requirement of phonetic families for the promotion of children from low first to high first grade, 74, or 61.6 percent, reported no minimum requirement; 16, or 13.3 percent, reported an indefinite minimum requirement; 9, or 7.5 percent, reported as requirement the phonetic families of the basal primer used in the school system; and 21, or 17.5 percent, reported a definite minimum requirement which ranged from 3 to 40 phonetic families, the median of which was 15 phonetic families.

7. It appears therefore that where definite minimum requirements in reading for the promotion of children from low first to high first are made, the medians are 2.31 primers, 1.80 first readers, 2.5 supplementary readers, 168.7 words, 25 phonographs, 15 phonetic families.

#### *B. For Promotion from High First to Second Grade*

The requirements in reading for the promotion of children from

high first to second grade show an interesting contrast with the requirements for promotion from low first to high first grade.

1. There were 156 administrators reporting on the minimum primer requirements for promotion from high first to second grade. Of these, 33, or 21.1 percent, reported no minimum requirement of primers; 15, or 9.6 percent, reported indefinite minimum requirement; 108, or 69.2 percent, reported a definite minimum requirement ranging from one to ten primers with a median of 2.89 primers.

2. Of the 160 reporting the number of first readers used as a minimum requirement for promotion from high first to second grade, 30, or 18.9 percent reported no minimum requirement of first readers; 15, or 9.4 percent, reported an indefinite minimum requirement, and 115, or 71.2 percent reported a definite minimum requirement ranging from one to 15 first readers with a median of 2.51 first readers.

3. There were 150 administrators reporting on minimum requirements of supplementary readers. There were 48, or 32 percent of these who reported no minimum requirement of supplementary readers for promotion from high first to second grade; 18, or 12 percent, who reported indefinite minimum requirement; and 84, or 56 percent, who reported definite minimum requirement ranging from one to 15 supplementary readers with a median of 3.5 supplementary readers.

4. Of the 119 who reported the minimum requirements of second readers, 83, or 69.7 percent reported no minimum requirement of second readers; 12, or 10 percent, reported indefinite minimum requirement; and 24, or 20.1 percent, reported definite minimum requirement ranging from one to 10 second readers, the median being 0.8 of a second reader.

5. There were 130 administrators who reported on the number of words to be recognized and recalled, required for promotion of children from high first to second grade. Of these 42 or 32.3 percent reported no minimum requirement; 20, or 15.3 percent, reported an indefinite minimum requirement of words; 6, or 4.6 percent reported as requirement the words in the basal first reader; and 62, or 47.6 percent, reported definite minimum requirement ranging from 50 to 1,639 words with a median of 290 words.

6. There were 119 administrators who reported on the mini-

minimum requirement of phonograms to be recognized and recalled; 58, or 48.7 percent of these, reported no minimum requirement; 23, or 19.2 percent, reported indefinite minimum requirement; 12, or 10 percent, reported as requirement the phonograms of the basal reader which was used by the city system; and 26, or 21.8 percent, reported definite minimum requirement ranging from 10 to 150 words with a median of 26.6 phonograms.

7. There were 116 administrators who reported on the minimum requirement of phonetic families. Of these 56, or 48.2 percent, reported no minimum requirement of phonetic families for promotion from high first to second grade; 25, or 21.5 percent, reported an indefinite minimum requirement of phonetic families to be recognized and recalled; eleven, or 9.4 percent, reported as requirement those phonetic families which occurred in the basal first reader; and 24, or 20.6 percent, reported definite minimum requirement ranging from 6 to 90 phonetic families with a median of 30.0 phonetic families.

8. When the medians of definite minimum requirements in reading for the promotion of children from low first to high first and from high first to second grade are compared, the differences in achievements are as follows:

Low first to high first grade

Primer 2.31;

First readers 1.80;

Supplementary readers 2.50.

High first to second grade

Primer 2.89;

First readers 2.51;

Supplementary readers 3.50;

Second readers 0.80.

Low first to high first grade

Words 168.7;

Phonograms 25.0;

Phonetic families 15.0.

High first to second grade

Words 290.0;

Phonograms 26.6;

Phonetic families 30.0.

## II. MEASUREMENTS OF MINIMUM REQUIREMENTS

*A. Achievement Tests*

1. Test scores required for promotion were reported by 6 different administrators. The test scores required for promotion were as follows:

NAME OF TEST	SCORES		
	LOW TO HIGH FIRST	HIGH FIRST TO SECOND	
Gray's Check Test .....	1.6	1.8	2.1
Detroit Reading .....	None	Rate 78	Errors 5
Detroit Word .....	12	20	20
Pressey Attainment .....	None	Test 1	Test 2
		Score 1.4	Score 2.2
Pressey Vocabulary .....	None	Test 1	Test 2
		Score 4	Score 2
Haggerty Reading .....	Less than median	Median	

2. Eighty-one, or 32.4 percent, of the administrators reported the measurement of children's achievements by the use of tests, the Haggerty Sigma I Reading Test and Pressey First Grade Attainment receiving respectively the highest frequencies of usage.

*B. Record or Rating Cards*

Cards for recording or rating children's first grade achievements in social studies, reading, number, art, language, and music were reported as being used by 47 or 21.4 percent of all of the 219 administrators.

## III. RIGIDITY OF ADHERENCE TO MINIMUM REQUIREMENTS

Of 219 administrators 46, or 21.0 percent, reported that the minimum requirements were rigidly adhered to; 103, or 47.0 percent, reported that they were not, and 70, or 32 percent, did not reply.

## PART II: EVALUATION AND DISCUSSION

## I. MINIMUM REQUIREMENTS IN READING

*A. Current Practice*

In the minimum requirement in reading, the number of books,

words, and phonetic elements required for promotion was so diverse in different school systems that it is evidently not standardized.

Of the administrators reporting requirements for promotion from low first to high first grade, a no-minimum requirement in the number of primers, first readers, and supplementary readers was reported by 26.7 percent, 63.3 percent, and 51.7 percent respectively; 51.6 percent reported a no-minimum requirement in words and 61.6 percent reported a no-minimum requirement in both phonograms and phonetic families. This response, "no minimum requirement," should not be construed to mean that children in these schools did not read. It can only be interpreted as meaning that no minimum attainment in reading was required in first grade for promotion in these schools. Contrasting the no-minimum requirement with the highest definite minimum requirement reported by any administrator, the difference was 10 primers, 5 first readers, 12 supplementary readers, 850 words, 62 phonograms, and 40 phonetic families. Since the median requirement in primers, and first and supplementary readers, is approximately 2.2 each; in words to be recognized 168.7, in phonograms to be recognized 25, and in phonetic families to be recognized 15, the divergences of the two extremes (in the number of books, words, and phonetic elements) from the medians in the minimum amount *required* of children in school systems for promotion from low first to high first grade, are large.

Minimum requirements for promotion from high first to second grade show a similar variation in the number of books, words, and phonetic elements. A no-minimum requirement in the number of primers, first readers, second readers, and supplementary readers was reported by 21.1 percent, 18.9 percent, 69.7 percent, and 32.0 percent respectively; 32.3 percent reported a no-minimum requirement in words, and 48 percent reported no-minimum requirements in both phonograms and phonetic families.

"No definite minimum requirement" was reported by approximately 10 percent of the administrators in primers, first, second, and supplementary readers; by 15.3 percent of the administrators in words; and by 19.2 percent and 21.5 percent respectively for phonograms and phonetic families.

The difference between the requirements of one group of administrators who reported no minimum requirement and another

group who reported the highest definite minimum requirement would be 10 primers, 15 first readers, 10 second readers, 15 supplementary readers, 1,639 words to be recognized and recalled, 150 phonograms, and 90 phonetic families to be recognized and recalled.

The deviation of the two extremes from the median is significant when the mental ages and the intelligence quotients of the lowest group in first grade are considered. The median minimum requirement in primers and first readers is 2.8 and 2.5 respectively; in supplementary readers 3.5; in words to be recognized and recalled 290; in phonograms 26.6; in phonetic families 30. The difference between the no-minimum requirement on the one hand and the highest minimum requirement reported, on the other, shows a wide gap in agreement among administrators as to what minimum reading requirement is acceptable in first grade. It has a significant bearing on the problem of first grade promotion and failure, particularly in connection with the transfer of children from one school to another and from one system to another.

The results of the study on minimum requirements in reading for purposes of promotion show tendencies in practice. The replies "no minimum requirement" and "no definite requirement" may be explained on the grounds (1) that with many administrators promotion is on a basis of what children are capable of achieving rather than a fixed number of books, words, and phonetic elements which must be acquired before progressing to the next grade or group; (2) that a definite requirement in reading is not necessary in order to do second grade work; (3) that requirements such as right attitudes toward reading, interests that stimulate a desire to read, social readiness, reading habits conducive to speed, and the like, are considered of more importance than a definite requirement in number of books, words, and phonetic elements; (4) that administrators are allowing first grades to evolve not from an exclusive reading program where the reading process is the important goal but from a program organized so that the reading process is the outgrowth of interests and needs of children; (5) that there is at present no analysis of reading to guide teachers in the rating of those traits which might be called reading success in first grade; or, (6) that there is an unwillingness on the part of some administrators to face conditions with constructive study.



The frequencies of any of the minimum requirements above the median may indicate (1) a curriculum in first grade that is exclusively reading; (2) a program for first grade teaching that is lacking in physical activity and has little variation in types of mental activity; (3) no reliable basis to indicate what children on different levels of mental age, social age, and intelligence quotient are capable of doing in a school that has a balanced program of mental, social, and physical activity; (4) a school curriculum in which the demands result in a large amount of failure; or (5) a "paper" requirement not carried out in the practice of the school systems reporting.

### *B. Findings of Research*

The maximum number of books that any child can read during the first half or the second half of a school year depends on many factors, including mental age, physical maturity, home environment, attitudes which teachers and parents have built up, other competing interests, special capacities a child may have, and the like. A minimum number of books to be read and a number of words and phonetic elements to be acquired before proceeding to second grade, if required, constitute an arbitrary standard set by administrators and teachers. The minimum which they would set would depend (1) on the attainments which they deem essential for children in the first grade before proceeding to the next unit of work; (2) on the wisdom of detaining a child in first grade until these objectives are accomplished; and (3) on the handicap to the child and to the teacher if the child enters the second grade before attaining the minimum essentials.

Scientific data to evaluate the requirement of a minimum number of books, words, and phonetic elements arbitrarily set up for children in first grade to master, are not specifically available. "Unfortunately, it is the beginning period in reading—as of many other subjects—that has been least thoroughly studied. For guidance during the first year there are available the results of relatively few studies of methods and devices for teaching and learning, relatively few instruments for measurement of attainment, relatively slight agreement concerning standards, relatively meager knowledge of vocabulary, interests, rate of learning, and retentiveness. Differences in practice may therefore be expected."<sup>1</sup>

<sup>1</sup> Gates, Arthur I., "Problems in Beginning Reading," *Teachers College Record*, March 1925

Two vocabulary studies and the Gates Word List for primary grades, however, throw light on the problem. Selke and Selke<sup>2</sup> analyzed the vocabularies of the beginning books of twelve reading methods. It was found "that certain books introduce several times as many words as others and that the amount of repetition in different books varies considerably. Few of these readers have more than one-third of their words in common with any other one of the twelve readers." Again, in the vocabulary study made by Packer,<sup>3</sup> the ten first-year readers which were tabulated show that "the recurrences of over 75 percent of words in different readers are so infrequent that one cannot regard them as necessary words for the first grade. Since first readers seldom introduce more than 500 new words, a pupil who has mastered a given reader would find an average of over 300 new words in any other one of nine readers."

The median number of the minimum requirements of books—primers, first readers, supplementary readers—was 6.6 for promotion from low first to high first. The median number of different words in each of the twelve beginning readers in the Selke and Selke study was approximately 400. When, therefore, a child in low first reads 6.6 readers, since only one-third of the words in each of these books is common to the words in any other, the vocabulary which he needs to know probably far exceeds 1000 words. It is apparent that if the Selke and Selke data are applicable to interpreting the extent of the vocabulary even the median number of books of minimum requirements reported would be beyond the intellectual capacity of children in low first grade.

The median of the minimum requirements in high first is approximately 9.7 books. The question might again be raised regarding the capacity of the immature child to achieve the vocabulary necessary to read this large number of books.

The need of choosing a basic vocabulary for beginning readers on the basis of criteria that meet the literary and informational needs and interests of children in the first grade is apparent. The word list constructed by Gates<sup>4</sup> is a valuable contribution. This list is based on (1) the criterion of utility for childhood *vs.* the

<sup>2</sup> Selke, Erich and G. A., "A Study of Vocabularies of Beginning Books of Twelve Reading Methods," *Elementary School Journal*, June, 1922.

<sup>3</sup> Packer, J. L., "The Vocabularies of Ten First Readers," *National Society for the Study of Education, Twentieth Year Book*, Part II, 1921.

<sup>4</sup> Gates, Arthur I., "The Construction of a Reading Vocabulary for Primary Grades," *Teachers College Record*, Vol. XXVII, No. 7, March, 1926.

criterion of utility for adult reading; (2) the criterion of utility in assisting the learners; (3) the criterion of practical utility in immediate adjustment to life conditions; (4) the criteria of interests; and (5) the criterion of difficulty. When beginning reading books can be checked on a word list of this nature it may be possible for the approximate minimum requirements on different intelligence levels to be established. It is suggested by Gates<sup>5</sup> that "a course confined largely to the first 500 words [from the Gates word list] during the first year, and the first 1000 words during the first two years would doubtless be more serviceable than most of those now available. Inasmuch as these words would be most frequently encountered in other reading material for children, the acquired vocabulary by virtue of being widely used would also be more readily learned. The objectionable features of many elementary reading courses is that they contain so many words used very infrequently elsewhere. Even when well developed in the classroom, the ability to recognize many words dies later from disuse."

"Tests of ability [based on this word list] to recognize and pronounce the words singly, especially ability to read with understanding various types of passages based entirely on words from different levels of the list, would indicate the range of the basal vocabulary and the degree of independent reading ability a pupil has achieved and, consequently, the security with which he may be entrusted, without danger of practicing errors, to read miscellaneous children's material in the school or home."

The suggestion by Gates of a vocabulary of 500 words in the reading content of first grade material is merely opinion, but it is expert opinion that is based on years of research on the problem of reading. Again, this estimate of 500 words is not an estimate of the minimum requirement of words for first grade children to recognize and recall, but indicates the vocabulary that ordinarily should be found in first grade reading content. The vocabularies of children on various ability levels would need to be carefully checked even to estimate the proper minimum requirements for children in low first and high first grades.

In evaluating the minimum requirements of phonetic elements for promotion from low first to high first grade and from high first to second, two factors need to be considered in the light of

<sup>5</sup> Gates, Arthur L., "The Construction of a Reading Vocabulary for Primary Grades," *Teachers College Record*, March, 1926.

as scientific data as are available: (1) the value of phonics for first grade children, and (2) in case they prove to be of value, the minimal number of phonics to be acquired in first grade.

An investigation made by Burbank<sup>6</sup> shows that the reading vocabulary of children is largely phonetic. "If pupils can be taught to see analogies and act upon them they can profit greatly by phonetic drills. An overwhelming majority of the words and syllables in English are phonetic. Because one word or syllable in seven is unphonetic, shall we ignore the 85 percent that are phonetic and teach our entire vocabulary as sight words, thus putting our language on a par with Chinese?"

In opposition to this value of phonics just quoted, Gates<sup>7</sup> says, "The use of phonetics is usually justified by such demonstrations as that of Burbank, that 85 percent of English words are phonetic. This proportion is phonetic, however, only in the sense that the relation of sounds and letter combinations may be covered by rules. For example, *cat* is said to be phonetic because in pronouncing it each letter is given a certain sound value which is found frequently in other words, and, furthermore, because the sound values which are to be utilized in any instance may be indicated by certain rules of custom. The fact remains, however, that phonetically *cat* may be legitimately pronounced as *Kate*, *cot*, *sate*, *sat*, *set*, and in other ways obtained through other renderings of the *a* vowel. The range of legitimate renditions is reduced considerably by the mastery of combinations (phonograms) which usually take fewer oral forms. But to tell which form the phonogram should take in particular instances requires either a wealth of experience with types of words which contain them or the mastery of rules, many of which the beginning child does not know and cannot easily learn, long remember or readily apply.

"Phonetics are also justified on the assumption that quite apart from the frequency of intelligible phonic consistencies, the training develops abilities to analyze words, to see likenesses and differences, and thereby to acquire independence of attack. Neither of these considerations is a complete justification. Purely visual study without memorizing phonograms and rules, without chant word-building drills, without the vocal dissections, such as 'pul-

<sup>6</sup> Burbank, E. D., "Phonetics in Elementary Grades for Teachers of Normal Children," *Volta Review*, XXI, Nos. 3, 5 and 6, 1920.

<sup>7</sup> Gates, Arthur L., "Problems in Beginning Reading," *Teachers College Record*, March, 1925.

lay, play,' 'hu-en, hen' may be more economic, effective and interesting."

The results or values of teaching phonics is indicated in a preliminary report <sup>8</sup> made upon work conducted in Franklin, N. H. According to this report an experiment was conducted in Grades I and II. In each grade "two classes of equal size and average ability were formed." The joint opinion of the teachers of these four classes was that the phonics classes sacrificed interest and meaning for formal elements. The phonics classes consistently fell behind the others. Not even in the attack upon new words did the phonics class excel. As a result of five years' experimentation on this problem the following conclusions were formed: (1) Phonetic drills have a real value but are not essential to every child as a part of the daily program in primary grades. (2) Phonetic drills should at all times be employed with discretion and adapted to the needs of the individual child or special group.

A further evidential consideration may be noted. Using the criterion of frequency, teachers in Winnetka, Illinois,<sup>9</sup> made an analysis of children's reading to determine what words and phonograms should be taught in Grades I and II. The list was based upon the vocabularies of ten first readers reported by Packer in the *Twentieth Year Book* and ten more modern primers and first readers. The Washburne list shows "the relative importance of certain letters and combinations of letters on a basis of frequency when the traditional phonetic system is pursued." Adapting the findings of the 50 most common phonograms to the needs of the children and methods used in the Winnetka school system, the following were selected for teaching: (1) The first 15 of the 50 phonograms, (2) all short vowel sounds, (3) all simple consonant sounds.

From the "Standards for planning phonetic training" in the *Twenty-fourth Year Book* <sup>10</sup> the following principles have a bearing on the number of phonetic elements for first grade:

"All early work in phonetics should be very simple; it should deal with common familiar words and with phonetic elements needed by the children.

<sup>8</sup> Currier, L. B. and Duguid, O. C., "Phonics or no Phonics," *Elementary School Journal*, Feb., 1923, Dec., 1916.

<sup>9</sup> Vogel, M., Jaycox, E. and Washburne, C. W., "A Basic List of Phonics for Grade I and Grade II," *Elementary School Journal*, Feb., 1923.

<sup>10</sup> *National Society for the Study of Education, Twenty-fourth Year Book, Part I, 1925.*

"Reasonable results should be required. They should be determined by the children's knowledge of a minimal number of phonetic elements and by their use of these elements in actual reading situations."

"In the surveys made with the final forms of the [pronunciation] test the examiners indicated whether some form of phonetic training had been utilized. The use of some types of phonetic training was found in over 80 percent of the classes in Grades I to IV. Omitting a few classes in the first two grades, in which little instruction of any sort in reading was given, it appears that those which received phonetic training are about equal to those which did not. The average scores were:

	Grade I	Grade II	Grade III	Grade IV
Phonetics.....	27.5	50.3	67.4	75.2
No Phonetics.....	26.1	54.6	62.3	77.0

"The differences here shown are of no significance. The data indicate merely that, in comparison with such other variables, the presence or absence of phonetic drill is not a conspicuous factor in achievement." <sup>11</sup>

Recently published reading systems <sup>12</sup> are advocating little phonetic training in the use of beginning reading. In one system the author writes, "If reading lessons provide abundant repetition of word and phrase, it is possible for the child to read without the aid of phonics. A child who does much easy reading gradually acquires a knowledge of phonics for himself." The primer in this system has only 195 different words and a reading content of 4,960 words. The average repetition is 25 words. The first reader adds 300 words to that of the primer. Total reading content 7,926 words.

In another even more recently published reading system <sup>13</sup> the author says, "Teachers may or may not use phonics. Some children make better progress after being exposed to phonics. Let it be optional. For those who wish to use phonics, when the child has the habit of content reading well formed, a large sight word vocabulary at his command, and when of his own accord he begins to feel the need of something to help him get the content more

<sup>11</sup> Gates, Arthur I., "A Test of Ability in the Pronunciation of Words," *Teachers College Record*, Nov., 1924.

<sup>12</sup> Baker and Baker, *The Bobbs-Merrill Reading Manual*, 1923.

<sup>13</sup> Hardy, Majorie, *The Child's Own Way*, 1925.

readily, phonics should begin. Work in phonics should be done at a separate time from the reading period.

"The preprimer chart consists of 122 words, the primer 269 additional words and the first reader 206 words, making a total of 597 different words with a total of 12,597 words of reading matter. The essential vocabulary is 215 words, or 90 percent of all the reading matter in the chart, primer and first reader."

These two reading systems and others are aiming to point the way to reading systems which will systematically select the number of words used and emphasize the importance of the individual needs of children in the acquisition of phonics.

### *Summary*

Of those administrators who reported minimum requirements in readers the data available to evaluate the median of the minimum requirements show that even the median number of books would demand a vocabulary over-extensive for first grade children in the low and in the high first grades.

The general value of phonetic training is still more or less in doubt. The best grounds for procedure are to be found in expert opinion and in the results from experiments that were not adequately controlled. These suggest (1) that phonetic training is not necessary for all children and may not be necessary for any; (2) that if it is given it should be adapted to individual needs; (3) that it should come late in first grade reading experience; that is, "after the habit of content reading is well formed" <sup>15</sup> and "after the pupil has acquired a basic vocabulary thru reading content"; <sup>14</sup> (4) that phonetics should not be confused with reading but the training should be given in a separate period.

## II. MEASUREMENT OF MINIMUM REQUIREMENTS

### *A. Standard Tests*

Eighty-one administrators listed 15 different tests which they used to measure first grade achievements. The Haggerty Reading, Pressey First Grade Attainment, and Detroit Word Recognition Tests were checked more times as used to measure first grade achievement than any others. Test scores required of children for promotion were reported by only six out of 219 administrators, or

<sup>14</sup> Gray, W. S., "Principles of Method in Teaching Reading as Derived from Scientific Investigation," *National Soc. for the Study of Education, Eighteenth Year Book*, Part II, 1919.

2.7 percent. Standards set by objective measurement are little used by the administrators of this group for the promotion of children from first grade.

### *B. Charts to Record or Rate Children's Progress*

There were 47, or 21.4 percent, of the 219 administrators who reported the use of charts to record or rate achievement in social habits, nature study, art, music, language, spelling, and writing. Two methods to secure data of the achievements of children are now in use; (1) that of recording children's experiences and analyzing these in terms of knowledges, habits, skills, attitudes, and appreciations in the different traits; and (2) that of analyzing the behavior of children in different traits, organizing these tendencies in rating card form and checking children's knowledges, habits, skills, attitudes, and appreciations in the different traits.

The first type of record is shown in the forms used in the Public Schools of Kalamazoo, Michigan, and the Horace Mann School, Teachers College, Columbia University. The second type is shown in the forms used in the Public Schools of Trenton, New Jersey, and in the Laboratory School of the School of Education, University of Chicago. Seven values are reported by those organizing and using the Chart for Recording Individual Interests and Progress in the Kindergarten Laboratory School, University of Chicago:<sup>15</sup>

- 1 It is a concrete means of keeping many specific points in mind in the development of an individual.
- 2 It provides a stimulus for the serious, detailed study of each child.
- 3 It gives evidence of a child's development throughout the year.
- 4 This evidence will enable a teacher to give each child more intelligent aid in his physical, social, and intellectual progress.
- 5 It makes possible a definite, detailed report of group accomplishment for the school year through a comparison of the initial and final checking.
- 6 This comparison gives a startlingly vivid picture of *accomplishment* and *failure*.
- 7 It is one important means of determining readings of children for promotion. The younger children tend to draw less progress in the "School Arts" division than in the other division of the chart.

If we assume that reading ability and the abilities in other traits in the kindergarten and first grade are of educational value to the child, and that teaching is to have a measurable economic

<sup>15</sup> Chicago University Charts.



value to the community, can administrators justify themselves if they fail to provide the best instruments obtainable to measure the progress of children in the traits which are of individual and social value?

### III. RIGIDITY OF ADHERENCE TO MINIMUM REQUIREMENTS

Out of 219 administrators reporting, 46, or 21.0 percent, replied that the minimum requirements were rigidly adhered to; 103, or 47.0 percent, replied they were not rigidly adhered to; and 70, or 32.0 percent, did not reply.

The advisability of setting up minimum requirements with no scientific basis for the grade placement of these requirements is to be seriously questioned. The danger on the one hand is of teachers forcing whole classes or individual children beyond their mental and physical capacity to meet these requirements, and on the other hand, of teachers not holding other more gifted classes or uncommonly able children to suitable standards.

Tables XXIXA to XXXVI, which follow immediately, deal with the data discussed here and on the foregoing pages of this chapter. Findings in regard to minimum requirements in reading for promotion from low first to high first grade are tabulated on pages 101 to 104 inclusive. Table XXIX gives in three sections the data relating to requirements in number of primers, first readers, supplementary readers, words, phonograms, and phonetic families. Table XXX presents a résumé of the three preceding pages.

Tables XXXIA to XXXII present material on the subject of promotion of children from high first to second grade. The three sections of Table XXXI deal with requirements in the number of primers, first readers, second readers, supplementary readers, words, phonograms, and phonetic families. These data are summarized in Table XXXII on page 109.

Findings in regard to responses from administrators who make no minimum requirements for promotion from low first to high first and from high first to second grade are shown in Table XXXIII. Table XXXIV gives the findings from the responses of administrators who make no definite requirements for promotion from low first to high first and from high first to second grade. The highest minimum requirements are discussed in Table XXXV. Table XXXVI presents the findings in regard to median requirements in reading for the promotion of first grade children.

TABLE XXIX-A  
MINIMUM REQUIREMENTS IN READING BY FOUR GROUPS OF ADMINISTRATORS FOR PROMOTION  
FROM LOW FIRST TO HIGH FIRST GRADE

N R = No report

Ndr = No definite requirement

PRIMERS						FIRST READERS							
No. Required	Supt.	Supv.	Prin.	Dir.	Total	Percent	No. Required	Supt.	Supv.	Prin.	Dir.	Total	Percent
None .....	0	17	18	6	41	26.7	None .....	0	66	18	6	90	63.3
<1 .....	0	3	0	0	3		<1 .....	0	0	0	0	0	
1 .....	9	24	0	0	33		1 .....	17	1	1	2	21	
2 .....	16	20	0	1	37		2 .....	4	5	1	0	10	
3 .....	1	4	2	4	11		3 .....	2	0	0	0	2	
4 .....	5	1	0	0	6		4 .....	1	0	0	0	1	
5 .....	1	2	0	0	3		5 .....	1	0	0	0	1	24.6
6 .....	0	0	0	1	1								
7 .....													
8 .....													
9 .....													
10 .....	1	0	0	0	1	62.0							
Ndr .....	0	17	0	0	17	11.1	Ndr .....	0	16	0	1	17	11.9
N R .....	57	6	0	3	66		N R .....	65	6	0	6	77	
Total .....	90	94	20	15	219	99.8	Total .....	90	94	20	15	219	99.8

Median = 2.31

Median = 1.8

TABLE XXIX-B  
 MINIMUM REQUIREMENTS IN READING BY FOUR GROUPS OF ADMINISTRATORS FOR PROMOTION  
 FROM LOW FIRST TO HIGH FIRST GRADE

N. R. = No report  
 B. P. = Basal primer  
 Ndr = No definite requirement

SUPPLEMENTARY READERS						WORDS RECOGNIZED							
No. Required	Supt.	Supv.	Prin.	Dir.	Total	Percent	No. Required	Supt.	Supv.	Prin.	Dir.	Total	Percent
None .....	0	44	19	7	70	51.7	None .....	0	37	18	6	61	51.6
1 .....	4	11	1	2	18		50 .....	0	1	0	1	2	
2 .....	2	3	0	0	5		75 .....	0	1	0	0	1	
3 .....	7	3	0	0	10		100 .....	0	7	0	2	9	
4 .....	3	1	0	0	4		139 .....	0	1	0	0	1	
5 .....	0	2	0	0	2		150 .....	0	2	1	1	4	
6 .....	0	0	0	0	0		175 .....	0	1	0	0	1	
7 .....	1	0	0	0	1		190 .....	0	1	0	0	1	
8 .....							200 .....	0	7	1	0	8	
9 .....							245 .....	0	1	0	0	1	
10 .....							300 .....	0	3	0	0	3	
11 .....							850 .....	0	1	0	0	1	
12 .....	0	1	0	0	1	30.3	B P .....	0	8	0	0	8	26.2
Ndr .....	0	23	0	1	24	7.7	Ndr .....	0	17	0	0	17	6.8
N R .....	73	6	0	5	84		N R .....	90	6	0	5	101	14.5
Total .....	90	94	20	15	219	99.7	Total .....	90	94	20	15	219	99.1

Median\* = 168.7

Median\* = 2.5

\* Medians are calculated on definite requirements.

TABLE XXIX-C  
MINIMUM REQUIREMENTS IN READING BY FOUR GROUPS OF ADMINISTRATORS FOR PROMOTION  
FROM LOW FIRST TO HIGH FIRST GRADE

N R = No report  
B P = Basal primer  
Ndr = No definite requirement  
C + V = Consonants and vowels

PHONOGRAMS RECOGNIZED							PHONETIC FAMILIES RECOGNIZED						
No. Required	Supt.	Supv.	Prin.	Dir.	Total	Percent	No. Required	Supt.	Supv.	Prin.	Dir.	Total	Percent
None .....	0	50	20	6	76	61.7	None .....	0	48	20	6	74	61.6
6 .....	2	0	0	0	2		3 .....	2	0	0	0	2	
8 .....	0	0	0	1	1		4 .....	1	1	0	0	2	
10 .....	0	0	0	2	2		5 .....	0	1	0	1	2	
12 .....	0	1	0	0	1		6 .....	0	1	0	0	1	
16 .....	0	2	0	0	2		7 .....	0	1	0	0	1	
17 .....	0	2	0	0	2		8 .....	0	1	0	0	1	
19 .....	0	1	0	0	1		10 .....	0	0	0	1	1	
25 .....	1	1	0	0	2		14 .....	0	1	0	0	1	
30 .....	3	2	0	0	5		16 .....	0	1	0	0	1	
42 .....	0	1	0	0	1		18 .....	0	1	0	0	1	
50 .....	0	1	0	0	1		20 .....	0	1	0	0	1	
60 .....	0	1	0	0	1		25 .....	0	1	0	0	1	
62 .....	0	1	0	0	1	17.8	26 .....	0	1	0	0	1	
							30 .....	1	1	0	0	2	
							35 .....	0	1	0	0	1	
							36 .....	0	1	0	0	1	
							40 .....	0	1	0	0	1	
B P .....	0	8	0	0	8	6.5	B P .....	0	9	0	0	9	17.5
C + V .....	0	5	0	0	5	4.0							7.5
Ndr .....	0	12	0	0	12	9.7	Ndr .....	0	16	0	0	16	13.3
N R .....	84	6	0	6	96		N R .....	86	6	0	7	99	
Total .....	90	94	20	15	219	99.7	Total .....	90	94	20	15	219	99.9
Median = 2.5							Median = 1.5						

Median = 2.5

Median = 1.5

TABLE XXX  
MINIMUM REQUIREMENTS IN READING BY FOUR GROUPS OF ADMINISTRATORS FOR PROMOTION  
OF CHILDREN FROM LOW FIRST TO HIGH FIRST GRADE

C+V = Initial consonants and vowels  
BP = Basal Primer  
Ndr = No definite requirement

PRIMERS				FIRST READERS				SUPPLEMENTARY READERS			
No. Required	No. Adm.	%		No. Required	No. Adm.	%		No. Required	No. Adm.	%	
None .....	41	26.7		None .....	90	63.3		None .....	70	51.7	
<1 to 10 .....	95	62.0		1 to 5 .....	35	24.6		1 to 12 .....	41	30.3	
Ndr .....	17	11.1		Ndr .....	17	11.9		Ndr .....	24	17.7	
Total .....	153	99.8		Total .....	142	99.8		Total .....	135	99.7	
Median = 2.31				Median = 1.80				Median = 2.50			
WORDS				PHONOGRAMS				PHONETIC FAMILIES			
None .....	61	51.6		None .....	76	61.7		None .....	74	61.6	
50-850 .....	32	26.2		6-62 .....	22	17.8		3-40 .....	21	17.5	
B.P. ....	8	6.8		B.P. ....	8	6.5		B.P. ....	9	7.5	
Ndr .....	17	14.5		C+V .....	5	4.0		Ndr .....	16	13.3	
Total .....	118	99.1		Ndr .....	12	9.7		Total .....	120	99.9	
Median = 168.7				Median = 25.0				Median = 15			

TABLE XXXI-A  
MINIMUM REQUIREMENTS IN READING BY FOUR GROUPS OF ADMINISTRATORS FOR PROMOTION  
FROM HIGH FIRST TO SECOND GRADE

N R = No report

Ndr = No definite requirement

PRIMERS						FIRST READERS							
No. Required	Supt.	Supv.	Prin.	Dir.	Total	Percent	No. Required	Supt.	Supv.	Prin.	Dir.	Total	Percent
None .....	0	26	2	5	33	21.1	None .....	0	23	2	5	30	18.9
1 .....	8	13	0	0	21		1 .....	14	25	1	1	41	
2 .....	20	16	0	1	37		2 .....	21	7	2	2	32	
3 .....	4	8	3	2	17		3 .....	4	10	2	1	17	
4 .....	7	6	1	2	16		4 .....	5	4	0	2	11	
5 .....	1	1	1	1	4		5 .....	0	2	1	0	3	
6 .....	0	3	3	0	6		6 .....	1	2	2	0	5	
7 .....	0	2	0	0	2		7 .....	0	0	0	0	0	
8 .....	1	0	0	1	2		8 .....	0	1	0	0	1	
9 .....	0	0	0	0	0		9 .....	0	0	0	0	0	
10 .....	0	2	0	1	3	69.2	10 .....	1	1	0	1	3	
Ndr. ....	0	11	2	2	15	9.6	11 .....	0	0	0	0	0	
N R .....	49	6	8	0	63		12 .....	0	1	0	0	1	
Total .....	90	94	20	15	219	99.9	13 .....						
							14 .....	0	1	0	0	1	71.2
							15 .....						
Median * = 2.89													

[Continued on page 106]

TABLE XXXI-A (Continued)

SECOND READERS					FIRST READERS (Continued)						
					No. Required	Supt.	Supv.	Prin.	Dir.	Total	Percent
None .....	0	72	11	0	83	69.7					
1 .....	11	4	0	0	15						
2 .....	1	0	1	0	2						
3 .....	4	0	0	0	4	20.1					
4 .....	2	0	0	0	2						
5 .....											
6 .....											
7 .....											
8 .....											
9 .....											
10 .....	1	0	0	0	1						
Ndr .....	0	12	0	0	12	10.0					
NR .....	71	6	8	15	99						
Total .....	90	94	20	15	219	99.8					

No. Required	Supt.	Supv.	Prin.	Dir.	Total	Percent
Ndr .....	0	11	2	2	15	9.4
NR .....	44	6	8	1	59	
Total .....	90	94	20	15	219	99.5

Median = 2.51

Median = .80

\* Medians are calculated on definite requirements.

Median = 2.51

TABLE XXXI-B  
MINIMUM REQUIREMENTS IN READING BY FOUR GROUPS OF ADMINISTRATORS FOR PROMOTION  
FROM HIGH FIRST TO SECOND GRADE

N R = No report  
B P = Basal Primer  
Ndr = No definite requirement

SUPPLEMENTARY READERS						WORDS							
No. Required	Supt.	Supv.	Prin.	Dir.	Total	Percent	No. Required	Supt.	Supv.	Prin.	Dir.	Total	Percent
None .....	0	36	6	6	48	32.0	None .....	0	37	0	5	42	32.3
1 .....	7	4	0	0	11		50 .....	2	0	0	0	2	
2 .....	11	10	0	1	22		82 .....	0	1	0	0	1	
3 .....	9	7	2	0	18		85 .....	0	1	0	0	1	
4 .....	7	3	1	1	12		100 .....	0	2	1	2	5	
5 .....	3	4	1	1	9		150 .....	0	2	1	1	4	
6 .....	3	2	0	0	5		200 .....	8	4	1	1	14	
10 .....	1	4	0	0	5		250 .....	2	3	0	0	5	
12 .....	0	1	0	0	1		300 .....	2	5	4	0	11	
15 .....	0	0	1	0	1	56.0	350 .....	2	1	2	0	5	
Ndr .....	0	17	0	1	18		400 .....	1	3	0	0	4	
N R .....	49	6	9	5	69	12.0	450 .....	0	1	0	0	1	
Total .....	90	94	20	15	219		500 .....	2	1	3	0	6	
							700 .....	0	2	0	0	2	
							1639 .....	0	1	0	0	1	47.6
							B. P. ....	0	6	0	0	6	4.6
							Ndr .....	0	18	0	2	20	15.3
							N R .....	71	6	8	4	89	
							Total .....	90	94	20	15	219	

Median\* = 3.5

\* Medians are calculated on definite requirements.

Median = 290



TABLE XXXI-C  
 MINIMUM REQUIREMENTS IN READING BY FOUR GROUPS OF ADMINISTRATORS FOR PROMOTION  
 FROM HIGH FIRST TO SECOND GRADE

N R = No report  
 B P = Basal Primer  
 B R = Basal Readers  
 Ndr = No definite requirement

PHONOGRAMS						PHONETIC FAMILIES							
No. Required	Supt.	Supv.	Prin.	Dir.	Total	Percent	No. Required	Supt.	Supv.	Prin.	Dir.	Total	Percent
None .....	0	43	8	7	58	48.7	None .....	0	41	8	7	56	48.2
10 .....	2	2	0	2	6		6 .....	2	3	0	0	5	
16 .....	0	1	0	0	1		8 .....	0	1	0	0	1	
18 .....	0	1	0	0	1		10 .....	0	1	0	0	1	
20 .....	0	4	0	0	4		14 .....	0	2	0	0	2	
25 .....	2	0	1	0	3		25 .....	1	1	0	1	3	
30 .....	1	1	0	0	2	21.8	30 .....	1	4	0	0	5	20.6
35 .....	1	1	0	0	2		34 .....	0	1	0	0	1	
40 .....	0	1	0	0	1		40 .....	2	2	0	0	4	
50 .....	0	2	0	0	2		50 .....	0	1	0	0	1	
64 .....	1	0	0	0	1		90 .....	0	1	0	0	1	
80 .....	0	1	0	0	1		B. R. ....	0	11	0	0	11	9.4
100 .....	1	0	0	0	1		Ndr .....	0	19	4	2	25	21.5
150 .....	0	1	0	0	1		N R .....	84	6	8	5	103	
B. P. ....	0	12	0	0	12	10.0	Total .....	90	94	20	15	219	99.7
Ndr .....	0	18	3	2	23	19.2							
N R .....	82	6	8	4	100								
Total .....	90	94	20	15	219	99.7							

Median\* = 26.6

Median = 30.0

\* Medians are calculated on definite requirements.

TABLE XXXII  
MINIMUM REQUIREMENTS IN READING BY FOUR GROUPS OF ADMINISTRATORS FOR PROMOTION  
OF CHILDREN FROM HIGH FIRST TO SECOND GRADE

C+V = Initial consonants and vowels

BP = Basal Primer

Ndr = No definite requirement

PRIMERS			FIRST READERS			SUPPLEMENTARY READERS			SECOND READERS		
No. Required	No. Adm.	%	No. Required	No. Adm.	%	No. Required	No. Adm.	%	No. Required	No. Adm.	%
None .....	33	21.1	None .....	30	18.9	None .....	48	32.0	None .....	83	69.7
1 to 10 .....	108	69.2	1 to 15 .....	115	71.2	1 to 15 .....	84	56.0	1 to 10 .....	24	20.1
Ndr .....	15	9.6	Ndr .....	15	9.4	Ndr .....	18	12.0	Ndr .....	12	10.0
Total .....	166	99.9	Total .....	160	99.5	Total .....	150	100.0	Total .....	119	99.8
Median = 2.89			Median = 2.51			Median = 3.5			Median = .80		
WORDS			PHONOGRAMS			PHONETIC FAMILIES					
No. Required	No. Adm.	%	No. Required	No. Adm.	%	No. Required	No. Adm.	%	No. Required	No. Adm.	%
None .....	42	32.3	None .....	58	48.7	None .....	56	48.2	None .....	56	48.2
50 to 1639 .....	62	47.6	10 to 150 .....	26	21.8	6 to 90 .....	24	20.6	6 to 90 .....	24	20.6
Ndr .....	20	15.3	B. P. ....	12	10.0	B. P. ....	11	9.4	B. P. ....	11	9.4
B. P. ....	6	4.6	Ndr .....	23	19.2	Ndr .....	25	21.5	Ndr .....	25	21.5
Total .....	130	99.8	Total .....	119	99.7	Total .....	116	99.7	Total .....	116	99.7
Median = 290			Median = 26.6			Median = 30.0					

TABLE XXXIII

NUMBER OF ADMINISTRATORS DEMANDING NO MINIMUM REQUIREMENTS IN BOOKS, WORDS OR PHONETIC ELEMENTS FOR PROMOTION OF CHILDREN FROM LOW TO HIGH FIRST GRADE AND FROM HIGH FIRST TO SECOND GRADE

PROMOTION REQUIREMENTS	L. F. TO H. F.		H. F. TO 2ND	
	No.	%	No.	%
Primers .....	41	26.7	33	21.1
First Readers .....	90	63.3	30	18.9
Second Readers .....	..	..	83	69.7
Supplementary Readers .....	70	51.7	48	32.0
Words .....	61	51.6	42	32.3
Phonograms .....	76	61.7	58	48.7
Phonetic families .....	74	61.6	56	48.2

TABLE XXXIV

NUMBER OF ADMINISTRATORS MAKING NO DEFINITE REQUIREMENTS IN BOOKS, WORDS OR PHONETIC ELEMENTS FOR PROMOTION OF CHILDREN FROM LOW TO HIGH FIRST GRADE AND FROM HIGH FIRST TO SECOND GRADE

PROMOTION REQUIREMENTS	L. F. TO H. F.		H. F. TO 2ND	
	No.	%	No.	%
Primers .....	17	11.1	15	9.6
First Readers .....	17	11.9	15	9.4
Second Readers .....	..	..	12	10.0
Supplementary Readers .....	24	30.3	18	12.0
Words .....	17	14.5	20	15.3
Phonograms .....	12	9.7	12	19.2
Phonetic families .....	16	13.3	11	21.5

TABLE XXXV

HIGHEST MINIMUM REQUIREMENTS REPORTED BY ADMINISTRATORS FOR  
PROMOTION OF CHILDREN FROM LOW TO HIGH FIRST GRADE AND FROM  
HIGH FIRST TO SECOND GRADE

PROMOTION REQUIREMENTS	L. F. TO H. F.	H. F. TO 2ND
Primers .....	10	10
First Reader .....	5	15
Second Reader .....	..	10
Supplementary Reader .....	12	15
Words .....	850	1639
Phonograms .....	62	150
Phonetic families .....	40	90

TABLE XXXVI

MEDIAN REQUIREMENTS BY ADMINISTRATORS FOR PROMOTION OF CHILDREN  
FROM LOW TO HIGH FIRST GRADE AND FROM HIGH FIRST TO SECOND GRADE

PROMOTION REQUIREMENTS	L. F. TO H. F.	H. F. TO 2ND
Primers .....	2.31	2.89
First Readers .....	1.80	2.51
Second Readers .....	..	0.8
Supplementary Readers .....	2.50	3.5
Words .....	168.7	290
Phonograms .....	25.0	26.6
Phonetic families .....	15	30

## CHAPTER V

### FAILURE AND PROCEDURES TO REDUCE FIRST GRADE FAILURE

#### PROBLEMS

1. What is the extent of failure and of repeating grades in the schools represented by the administrators who replied to this questionnaire?
2. What means have been used in these schools to reduce failure?

#### PROCEDURE

Administrators were requested to furnish data concerning enrollment, promotion, failure, and repetition for the year ending in June, 1925, for children in low first grade and high first grade. This information was given by only 32 administrators for the children in low first and by 73 administrators for the children in high first. The percent of failure was obtained on the basis of the number promoted plus those who failed—not on the basis of enrollment.

Administrators were asked to check the procedures they had used to reduce failure. The nine following procedures were listed in the questionnaire and were checked with the frequency listed by number and by percent.

#### PROCEDURES USED TO REDUCE FAILURE

	No.	Percent
1. Placing reading in the kindergarten.....	34	5.2
2. Changing first grade promotion standards.....	59	9.0
3. Using different standards for different ability groups.....	133	20.3
4. Using a connecting class for pupils not ready for first grade work.....	59	9.0
5. Using a mental age of 6 years for entrance to first grade.....	59	9.0

	No.	Percent
6. Limiting the number of years a child may remain in first grade.....	91	13.9
7. Coaching slow children.....	151	23.0
8. Promoting a fixed percentage, based on normal distribution curve.....	7	1.0
9. Using Individual Method, such as Winnetka System.....	48	6.4

To these items certain of the administrators made additions as follows:

10. Summer School.....	2	0.3
11. Using unified kindergarten-primary program.....	1	0.1
12. Encouraging natural learning activities.....	1	0.1
13. Placing children in opportunity class if mental tests show need.....	2	0.3
14. Dividing reading classes into three groups.....	1	0.1
15. Special teachers.....	1	0.1
16. Removing requirements of reading for promotion..	1	0.1
17. Getting good teachers, trained and well prepared..	1	0.1
18. Retarding only those who in teacher's judgment will benefit.....	1	0.1
19. Using chronological age of entrance to Grade I...	1	0.1
20. Health examination.....	2	0.3
21. Seeking coöperation at home.....	1	0.1
22. Individual instruction and individual checking....	1	0.1
23. Slow children in small groups, bright children in large groups.....	1	0.1
24. Individual help and combination method.....	2	0.3
25. Fitting curriculum to needs of groups.....	1	0.1
26. Having two or three groups to meet individual troubles.....	2	0.3
	663	99.5

Out of 219 administrators 192 checked some procedure or procedures which they were using to reduce first grade failure.

## PART I: SUMMARY OF FINDINGS

### I. EXTENT OF FAILURE AND REPEATING IN FIRST GRADES

#### *A. Low First to High First*

1. Only 32, or 14.6 percent, of the administrators reported on the number of children failing and repeating the low first grade. The enrollment in these 32 schools was 39,102 children. There

were at the time of promotion 37,576 children; 30,616, or 81.2 percent, were promoted and 6,960, or 18.5 percent, failed to be promoted. The range of percent of failure was from 3.7 percent to 40 percent, and the median was 18.5 percent.

2. Out of 37,576 children 2,179 children were repeaters once; 543 repeated twice; and 80 children repeated three times. In all 2,802 children, or 7.4 percent, had repeated the first grade one, two, or three times.

3. Of the 2,802 who were repeaters during the year 1925, 360, or 12.8 percent, failed to be promoted in June, 1925.

4. Out of the 37,576 children 401, or 1.6 percent, were promoted conditionally and also 208, or 0.5 percent, had a double promotion.

### *B. High First to Second Grade*

1. Seventy-five administrators in all reported on the extent of failure and repeating in high first grade. Forty-eight supervisors of public schools reported on 51,918 children. There were at the time of promotion 49,190 children in actual attendance; 42,978, or 87.3 percent, were promoted and 6,212, or 12.6 percent, failed to be promoted. The range of failure was from 2.8 percent to 32.0 percent, and the median was 10.8 percent.

2. Out of 49,190 children 2,371 children were repeating the grade for the first time; 284 were repeating it the second time; and 40 were repeating it for the third time. There were in all 2,695, or 5.4 percent, who had repeated the first grade one, two, or three times.

3. Of the 2,695 repeating the work in 1924-1925, 61 or 2.2 percent failed to be promoted in June, 1925.

4. Out of 49,190 children, 934, or 1.7 percent, were promoted conditionally; while 619, or 1.2 percent, had a double promotion.

5. In a single school system 14 principals reported an enrollment of 986 children. There were at the time of promotion 983 children; 864, or 87.9 percent, were promoted; 119, or 12.0 percent, failed to be promoted. The range of failure was from 2.8 percent to 20 percent, with a median of 10.0 percent.

6. Of the 983 children 73 repeated once; two repeated twice, and one repeated three times. There were in all 76, or 7.7 percent, who had repeated the first grade one, two, or three times.

7. Of the 76 repeaters in 1924-1925, two, or 2.6 percent, failed to be promoted in June, 1925.

8. Out of 983 children, 18 were promoted conditionally, and 2 or 0.2 percent had a double promotion.

9. Eleven directors of laboratory schools reported an enrollment of 241 children. There were at the time of promotion 225 children; 210, or 93.3 percent, were promoted; 15, or 6.6 percent, failed to be promoted. The range of failure was from 0.0 to 28.5 percent with a median percent of zero.

10. Of the 225 children one child repeated once; and no children repeated twice or three times. There was then but one child, or 0.4 percent, who repeated.

11. There were no children repeating who failed to be promoted.

12. Of the 225 children 5, or 2.2 percent, were promoted conditionally; and 16, or 7.1 percent, had a double promotion.

## II. PROCEDURES TO REDUCE FIRST GRADE FAILURE

Twenty-six procedures to reduce first grade failure were checked 654 times by 192 administrators.

Of these 654 times that all procedures were checked "Coaching slow children" was checked 151 times, or 23.0 percent; "Using different standards for different ability groups" 133 times, or 20.3 percent; "Limiting the number of years a child may remain in kindergarten," 91 times, or 13.9 percent; "Changing first grade standards," "Using a connecting class for pupils not ready for first grade work," and "Using a mental age of 6 for entrance to first grade," were each checked 59 times, or 9 percent; "Using an individual method" was checked 42 times, or 6.5 percent; and "Placing reading in kindergarten" 34 times, or 5.2 percent. The other procedures were checked in all 28 times, or 3.9 percent.

## PART II: EVALUATION AND DISCUSSION

### I. FAILURES AND REPEATERS

The percent of failure in the public schools of this study is much less than the failure shown in the public schools reported by Dickson, who says: "It is a serious thing to fail to promote a child when his fellows move ahead, and nearly all teachers feel the



weight of such responsibility. Yet failure is very common. If every child who fails of promotion were coated black we would have at least one out of every four thus labeled before the first grade had been finished."<sup>1</sup> In the present study, there are approximately one out of every six in low first and one out of every eight in high first who fail in the schools reported upon.

The data of this study would represent, then, schools not exceptionally bad, and the statements made in preceding chapters would refer to conditions that are found in schools where the larger share of administrators are endeavoring to reduce first grade failure.

The data of this study show more failure and repeating in the low first than in the high first grade and fewer double promotions. This may indicate (1) that curricula in low first are commonly less suited to the interests, needs, and capacities of children in that grade than are the curricula for children in high first; or (2) that low first grade requirements for promotion "weeds" the weak ones out and gives the high first grade a more selected group.

There are no significant differences in the extent of failure made evident by comparing the results of 48 school systems in high first grade with 14 schools in one public school system.

A comparison of the promotion and failure in public schools with the promotion and failure in laboratory schools reveals that the percent of failure is approximately one-half as much in the laboratory schools as in public schools that reported. Both the percent of children who are conditioned when promoted and the percent who receive a double promotion are significantly greater in the laboratory schools than in the public schools.

## II. PROCEDURES TO REDUCE FIRST GRADE FAILURE

Comprehension by administrators of the significance of the problem of first grade failure is evident in that 192 out of 219 of them checked one or more procedures used in their schools or school systems to eliminate or reduce failure.

Any procedure to reduce first grade failure needs to be based on the fundamental principles of how to make learning profitable and economical for the child. There needs to be (1) a recognition of the facts that there are individual differences of children's innate ability to learn, which should be determined by measure-

<sup>1</sup> Dickson, Virgil E., *Mental Tests and the Classroom Teacher*, 1924.

ment; (2) provision of differential curricula to meet the varying needs and capacities of children; (3) a plan for promotion from one grade to the next on the basis of the child's capacity and ability to accomplish; (4) a scientific basis for the placement of reading and other subjects in given groups or grades.

The practice most frequently checked to reduce first grade failure was "coaching slow children." This may indicate a dangerous tendency on the part of administrators to push slow children beyond their capacities, interests, and needs in reading or other subjects in order to have them accomplish the work outlined in a fixed curriculum. This procedure to reduce failure has a tendency to force children to fit a curriculum. The comparative values of the experiences of which children are deprived during the time they are being coached, and the attitudes children build up toward the subject in which they are being coached, are important factors to consider in the use of the practice of coaching slow children as a means of reducing failure. A curriculum organized to meet the needs and capacities of children and the placement of subjects in the curriculum on the basis of their readiness for them would probably eliminate the need for coaching slow children and give to them instead the benefits of a well balanced and well organized program of work. Coaching children who have the capacities, interests, and needs that a fixed curriculum satisfies but who are retarded because of poor attendance, has a sounder basis as a procedure to reduce failure than has coaching slow children.

The "individual method" which allows children to progress from one unit of work to the next on a basis of their capacity and ability to accomplish, and the differentiated curriculum which requires different promotion standards for different ability groups, are apparently replacing those procedures which force children to do what their mental age, interests, and needs show them to be unready to do. "Changing first grade promotion standards" and "using a mental age of six" again show an adaptation of the curriculum to the child.

Using a "connecting class for pupils not ready for first grade work" would seem to be superfluous if organized to reduce the failure of slow children. Children who have low intelligence quotients in first grade are fairly certain to retain them throughout their whole school experience. The problem, then, seems to demand a curriculum for these children which will comprehend

their whole school experience and largely eliminate failure and its resulting discouragement. Connecting classes as a unit in a school's organization were organized before the sectioning of classes on a more scientific basis was formulated. As a beginning step to meet the problem of backward children in first grade the procedure is to be commended, but as a way to solve the problem of the complete educational journey of children belonging in such a group it is apparent that such connecting classes take care only of the first of the recurrent difficulties of adjustment to a curriculum. Nothing but a complete special curriculum organized on the basis of ability to do can meet the needs of backward children.

"Limiting the number of years a child may remain in kindergarten" does not meet the problem of reducing failure unless that limit is one year, and unless the curriculum is adapted to a child's native capacities, needs, and interests. Allowing a child to progress from one grade where he finds the curriculum too difficult to the next grade where the curriculum is still more difficult, again does not seem the procedure which will make the backward child profit most by his school experience or prepare him for the work in life which he is capable of doing.

"Promoting a fixed percentage based on a normal distribution curve" is a procedure which predetermines a certain percentage of failures. The advantage seems to be in limiting the number promoted and failed. To plot the distributions of the achievements of children, their intelligence quotients and their mental ages is an administrative device helpful in discovering both the range of capacities and the range of curriculum achievements. But to eliminate a percentage of children from a class on the basis of a mechanical device would seem to tend to the entire neglect of the important issues of providing a differentiated curriculum and of promoting on a basis of what a child's capacities make him capable of achieving.

The value of "placing reading in the kindergarten" as a procedure to reduce first grade failure would need to be determined from the facts which show the relative value of reading to the child at this stage of growth and development. Traditionally, a chronological age of six has been set for the reading age. Worked out on a more scientific basis a mental age of six is now advocated by students of research as the age for children to do first grade work when there is a reading curriculum. Evidences of success in read-

ing on this mental age basis have been noted in previous chapters. The more careful students in research, however, hold that not all the facts are available to determine a child's readiness for reading even when the child has a mental age of six. So far as this one factor, which is without doubt a very important factor, can predict a child's success in reading it should be used; but to use it exclusively or to fail to consider other factors would be to ignore the findings of scientific research. Whipple<sup>2</sup> says: "We cheerfully admit that we measure merely certain aspects of behavior, and thence infer the existence of a certain degree of something that can be designated as general intelligence. We cheerfully admit that many other factors besides that of general intelligence do influence the progress of pupils in our schools. We do try to recognize and allow for the operation of these supplementary factors. We contend, however, that our intelligence tests do measure with a decision that is surprisingly satisfactory, a factor which is of the utmost significance for educational progress."

The place in the school organization for reading to begin should then be made to depend upon the time when and the grade where a child shows reading readiness. Psychologically, a mental age of six has been fairly scientifically selected as the time. Traditionally, the first grade was arbitrarily selected as the place. Practically, it may be the kindergarten, or the first grade, or the second grade; the criterion for placement being *readiness to read*, that is, social, physical, intellectual, emotional, and mental readiness. It would be as unjust to deprive an overbright child of four the joy of learning to read as to force a mentally deficient child of eight to attempt the drudgery of reading.

In the organization of a curriculum in any subject for the first grade it is both psychological and logical procedure to progress by building the first grade materials of instruction on the basis of a child's learning in kindergarten. To place reading in the kindergarten because a child is unable to acquire the ability to read in first grade, is to adopt a procedure which will force the organization to regress from first grade to kindergarten. In other words, it would seem unsound reasoning to place reading in the kindergarten because it has been found that children in the first grade were not sufficiently mature to read. Reports of this unreadiness for first grade work on the part of a fifth of the children, and of

<sup>2</sup> Whipple, G. M., "Educational Determinism," *School and Society*, June 3, 1922.

the causes for such unreadiness, have been referred to in various chapters of this study.<sup>3</sup>

In order to determine the proper placement of reading in an educational organization it is necessary to discover the mental ages of children to be taught, and also to consider carefully the physical, social, emotional, and intellectual factors which influence their readiness for reading and their attitude toward learning to read.

<sup>3</sup> Note Chapter II, p. 38.

## CHAPTER VI

### PRESENT TENDENCIES POINTING TO FUTURE TRENDS

#### I. PRESENT TENDENCIES

Certain tendencies in administration for the admission of children to and the promotion of children from first grade were apparent in this study (1) in the current practice of administrators, and (2) in the findings of scientific research.

1. The use of chronological age as the decisive factor for the admission of children to first grade shows a tendency to hold to traditional objectives, to disregard the findings of scientific research, and to ignore the value of kindergarten learning as a basis for first grade work on differing levels of ability.

2. The use of reading as the decisive factor for promotion or progress from low first to high first grade and from high first to second grade indicates a tendency to minimize values in other subjects, particularly pertaining to (1) social relationships, (2) special subjects, such as nature, music, and fine arts, the ends of which conduce to the wise use of leisure, and (3) health.

3. The lack of correspondence between the chronological age factor for the admission of children to first grade and the reading factor for the promotion from low first and high first grade tends to disregard those curriculum objectives which are based upon continuity in developing traits important for the individual and social life of a child at this stage of growth.

4. To admit children to first grade on a chronological age basis and promote them on a reading achievement basis without scientific placement of reading inevitably tends (1) to lead both teacher and pupil to place emphasis on a narrow aspect of the curriculum and to neglect the outcomes from a balanced curriculum, comprehending leisure, practical efficiency, health, and citizenship, and (2) to place emphasis on curriculum content for which children may not be mentally, intellectually, emotionally, or physically ready.

5. The use of such subjective measures as teacher's, principal's and parent's judgments to determine the status of a child in different factors is justifiable (1) when no objective measure is available to measure the trait, and (2) when it is important to measure the elements in a trait that objective tests do not measure. To neglect the use of objective measures when they are available is an indefensible failure to accept the advantages which scientific methods offer.

6. The use of subjective judgment as a measure of character and social traits without analysis on a rating card or similar device of the behavioristic tendencies of the traits tends (1) to make the judgment vague and indefinite, and (2) to make the teacher's judgment of the weakness or strength of a child in a given trait difficult of interpretation by the succeeding teacher.

7. The use of non-standardized tests or examination marks to determine the achievement of children in first grade tends to give emphasis to a subjective method. This method of measuring may be (1) of a type which depends on the subjective judgment of the teacher, varying so markedly when the same material has been evaluated by different teachers or by the same teacher at different times that the results are not just, and (2) of a type which takes an objective form, reducing subjective judgment to a minimum. Such tests, however, at the best, do not make possible comparisons between grades, school systems, and such yearly inspection of improvements of practice and of growth as are easily possible when the best standard tests are used.

8. The variations and wide range of minimum requirements in reading for promotion from low first and high first grades indicate no agreement among administrators as to what the requirements should be and no agreement upon a scientific basis for the requirements given.

9. The procedures in evidence for reducing first grade failure showed contradictory tendencies: in some cases the practice of forcing the child to meet the demands of the curriculum, and in others the tendency to adjust the curriculum to meet the needs and capacities of the child.

## II. FUTURE TRENDS

Scientific research, expert opinion, and the practice of the labora-

tory schools and of such public schools as are endeavoring to utilize the findings of research are inducing trends for the reorganization of promotion procedure in the kindergarten and first grade that are significant.

1. In the setting up of standards for promotion in the kindergarten and first grade there is in process of evolving a statement of objectives which (1) have as basis the concept of helping children "to live an increasingly rich and worthy life" at this age level; (2) plan the work of these years in the perspective of the whole educational journey; and (3) determine by a scientific process the selection of materials for the specific units which make up the whole.

2. Promotion or progress is tending to come to mean growth and development, and to be applied to any trait, factor, or subject in the curriculum which helps the child "to live an increasingly worthy life."

3. Sectioning within a grade shows a tendency to be determined experimentally upon the factors which help the child to work to his maximum mental, physical, and emotional capacity and which predict his probable success.

4. The inclusion or exclusion of all materials of instruction—even reading—is to be determined by their relative social values; and when they are included their placement is to be decided by the capacities, the interests, and the abilities of individual children.

5. The status of the child in any intellectual, mental, social, physical, and moral trait is to be determined (1) by objective measurements to the extent that such are available, and when necessary supplemented by expert opinion, for example, that of doctors, psychologists, and psychiatrists; or (2) by the subjective opinion of teachers, parents, principals, and other persons in close contact with the child, who should, however, be guided in their judgments by an analysis of the behavioristic tendencies of the trait.

6. The question of accepting a teacher's judgment instead of that of an expert is to be determined (1) by what the school is ready to assume as its responsibility for the development of a child; (2) by the training and experience a teacher has received for judging a trait which ordinarily requires the diagnosis and interpretation of an expert; and (3) by the amount of error that results from teacher's judgment.



## APPENDIX

### AN INVESTIGATION OF ADMISSION AND PROMOTION STANDARDS IN GRADE I AND THEIR RELATIONSHIP TO FAILURE

BY M. M. REED

TEACHERS COLLEGE, COLUMBIA UNIVERSITY

Supervisor.

Name of City.....Superintendent.....

1. To what extent are the following factors used as a basis for admission to First Grade?

(1) Place checks (✓) in appropriate columns to show the approximate percent value of the following factors in determining promotion *from Kindergarten* to First Grade in your schools.

(2) Place a cross (X) in appropriate columns to show the approximate percent value of the following factors in determining admission of *non-Kindergarten* children.

Use the cross (X) to show entrance requirements if there is no Kindergarten

\*(The sum of all the checks should equal 100%)

(The sum of all the crosses should equal 100%)

Factors determining entrance to First Grade	0%	10%	20%	30%	50%	75%	90%	100%	
1. Chronological Age									
2. Mental Age									
3. General Health									
4. Physical Maturity									
5. Emotional Stability									
6. Health Habits									
7. General Conduct									
8. General Ability to do First Grade Work									
f									

\*Count your checks (✓) or crosses (X) to see if they equal 100%

†In vacant spaces add any other factors which you use.

II. Admission *standards* for each factor—how and by whom determined.

1. — State the chronological age at which children are normally admitted to first grade.
- Yes May a child be admitted at a younger chronological age if he is mentally above normal?
- No May a child of normal chronological age be refused admission if he is mentally below normal?
- What specific *mental* age, if any, is required as a basis of admission to first grade?
- What standard tests are used for determining mental age?

Place a check before the methods used as a basis of rating general health.

- Teacher's estimate
- Parents' judgment
- Medical record—please send sample record card  
(physician or nurse)

Place a check before the method used to determine physical maturity.

- Teacher's judgment      *Anatomical measurements*
- Parents' judgment      — Height-weight index
- Observation of dentition      — X-ray of carpal bones or  
dentition

Place a check before the methods you use as a basis of rating emotional stability.

- Teacher's qualitative estimate
- Rating plan or Card. Please send sample.

5. List the health habits, if any, which you use in the kindergarten as a basis for promotion to first grade (or enclose any list or record card which you use).
6. Place a check (✓) before the method used to rate the child's health habits.
- Teacher's rating on 5 point (or 3 point) scale
- Mark on percentage basis
- Scoring as: *Sometimes*      *often*      *never*
- 
7. Place a check (✓) before the method used to rate the child on General Conduct.
- Teacher's rating on 5 point scale

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- \_\_\_ Mark on percentage basis
- \_\_\_ Number of "demerits"

8. Place a check (✓) before the person who determines general ability to do first grade work.

- \_\_\_ Teacher
- \_\_\_ Principal or Supervisor
- \_\_\_ Parent

Place a check before the method used to determine general ability.

- \_\_\_ Teacher's (or principal's) subjective judgment of readiness for first grade
  - \_\_\_ Judgment based upon *records* of accomplishment
  - \_\_\_ Judgment based upon "readiness" tests (enclose copy of test used)
  - \_\_\_ Judgment based upon intelligence tests, physical records and other objective measurements
9. When you get all of the different measures of a child together (*i.e.* his chronological age, mental age, general estimate of his ability to do first grade work, etc.) how do you combine or use these in order to determine his promotion or grouping?

III. Is limited room space a factor in determining the number of children promoted from Kindergarten to First Grade? Underline the word in the first row which shows the *direction* of the influence. Underline the word in the second row which indicates the *extent* of the influence.

Increase number promoted,	Decrease number promoted
much	little      none

IV. Does any other factor influence the number of children promoted?

V. If there is any ruling as to the number of years a child may remain in the kindergarten indicate the number\_\_\_\_\_

VI. If there is a ruling limiting the number of years a child may remain in the first grade indicate the number. If no limit write "none"\_\_\_\_\_

VII. To what extent do the following factors determine promotion from Low First Grade to High First; from High First Grade to Low Second Grade?  
(1) Place checks (✓) in appropriate columns to show the approximate percent value of the different factors used as bases for promotion from Low First to High First.

(2) Place crosses (×) in appropriate columns to show the approximate percent value of the different factors used as bases for promotion from High First to Low Second.

Note: *Low* signifies first semester, *High* second semester. (Use only cross if there is no midyear promotion).

\*(The sum of all the checks should equal 100%)

(The sum of all the crosses should equal 100%)

Possible factors in First Grade Promotion	0%	10%	20%	30%	50%	75%	90%	100%
1. Ability to read								
2. Ability in number								
3. Ability in language								
4. Ability in art								
5. Ability to adjust socially								
6. Ability in nature study								
7. Ability in music								
8. Ability in writing								
9. Ability in spelling								
10. Physical maturity								
11. Chronological age								
12. Mental age								
13. Emotional stability								
14. General health								
15. Health habits								
16. Attendance								
17. Effort								
18. General conduct								
19.								
20.								

\*Count checks (✓) or crosses (X) to see if they equal 100%.

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VIII. Check (✓) the methods *used in your school* for determining status of children in Grade I in the different factors listed below.

Note: (It is possible to check more than one method for one promotion standard).

Promotion Factors	Standard achievement tests	Standard intelligence tests	Non-standardized tests or exams	Teacher's estimate	Other methods (specify)
1. Ability to read					
2. Ability in number					
3. Ability in language					
4. Ability in art					
5. Ability to adjust socially					
6. Ability in nature study					
7. Ability in music					
8. Ability in writing					
9. Ability in spelling					
10. Health habits					
11. Effort					
12. General conduct					
13. Physical maturity					
14. Emotional stability					
15. General health					
16.					
17.					
18.					

**Yes** Would a child with a satisfactory rating in reading be denied

**No** promotion because of a low rating in any other factor?

IX. 1. For promotion from *low first* to *high first*, list minimum number of

- \_\_\_ Primers
- \_\_\_ First Readers
- \_\_\_ Supplementary Readers
- \_\_\_ Words to be recognized
- \_\_\_ Phonograms to be recognized
- \_\_\_ Phonetic families to be recognized

2. For promotion from *low first* to *high first*, list minimum requirements in

- \_\_\_ Counting
- \_\_\_ Reading and writing numbers
- \_\_\_ Number combinations
- \_\_\_ Fundamental processes
- \_\_\_ Measurements

3. For promotion from *high first* to *second grade*, list minimum number of

- \_\_\_ Primers
- \_\_\_ First Readers
- \_\_\_ Second Readers
- \_\_\_ Supplementary Readers
- \_\_\_ Words to be recognized and recalled
- \_\_\_ Phonograms to be recognized and recalled
- \_\_\_ Phonetic families to be recognized and recalled

4. For promotion from *high first* to *second grade*, list minimum requirements in

- \_\_\_ Counting
- \_\_\_ Reading and writing numbers
- \_\_\_ Number combinations

Fundamental processes \_\_\_\_\_

Measurements \_\_\_\_\_

Types of problems necessary for children to solve \_\_\_\_\_

5. Are these minimum requirements rigidly adhered to?

6. List by name any tests you are using to measure first grade achievements. Indicate after the test the score required for promotion.

Test used for first  
grade achievement

Score for  
Low First

Score for  
High First

7. Do you use any card to record or rate the achievements of children in social habits, nature study, art, music, writing, spelling, language?

*Important*—Please enclose samples of any such record or rating cards.

- X. Indicate in the first column the person or persons who determine the *standards* of promotion. In the second column, indicate the person or persons who decide *whether or not a given child is to be promoted*. Number the persons, 1, 2, 3, etc. in order of their importance in making the decision, 1 being the most important.

Superintendent	
Assistant Superintendent	
Supervisor	
Principal	
Teacher	
Board of Education	

- XI. Are the first grades divided into sections according to ability?

Yes \_\_\_\_\_ No \_\_\_\_\_

If so, check those factors which are used as basis for sectioning.

Teacher's estimate of ability \_\_\_\_\_

Non-standardized examination \_\_\_\_\_

Standard intelligence tests \_\_\_\_\_

Standard achievement tests \_\_\_\_\_

- (1) List in order of your preference any standard tests which you use for this purpose.
- (2) List any variation in standards for promotion in the different ability groups.

Note: If you have any plan of sectioning and grading which provides for different rates of progress through the grades, a brief description would be appreciated. Include practice with reference to irregular promotions.

- XII. When you get all of the different measures of a child together (i.e. mental age, achievements in subjects, etc.) how do you plan to combine or use these in order to determine his promotion or grouping?
- XIII. Is limited room space a factor in determining the number of children promoted from first grade to second grade? Underline the word in the first row which indicates the *direction* of the influence. Underline the word in the second row which indicates the *extent* of the influence.

Increases number promoted	Decreases number promoted
much	little                      none

XIV. In the spaces below please give the information requested.

Note. Low signifies the first semester's work and High the second semester's work. If there is no midyear admission and promotion, give annual figures under *High*.

	<i>Low First</i> Boys Girls		<i>High First</i> Boys Girls	
Number on roll in Grade 1, June 1925				
Number promoted to next grade, June 1925				
Number given double promotion				
Number promoted <i>on</i> condition (or trial), June 1925				
Number not promoted, June 1925				
Number on roll repeating—1st time				
Number on roll repeating—2d time				
Number on roll repeating—3 or more times				
Number of those not promoted who were repeaters				

XV. Check any procedure that you have used to reduce failure.

- ☐ 1. Placing reading in the kindergarten
- ☐ 2. Changing first grade promotion standards
- ☐ 3. Using different standards for different ability groups
- ☐ 4. Using a connecting class for pupils not ready for first grade work
- ☐ 5. Using a mental age of 6 years for entrance to first grade
- ☐ 6. Limiting the number of years a child may remain in first grade
- ☐ 7. Coaching slow children
- ☐ 8. Promoting a fixed percentage based on normal distribution curve
- ☐ 9. Using Individual Method, such as Winnetka System



10.

11.

- XVI. What factors are, in your opinion, responsible for failure of first grade children to meet the requirements for promotion in the normal time? Please number the factors in the order of their importance. Add factors if necessary.

*In Child*

Poor attendance (not due to ill health)

“ health (not causing excessive absence)

“ health accompanied by much absence

“ conduct

Chronologically too young at entrance

Mentally immature though of normal chronological age

Lack of effort

Lack of initiative

Insufficient sleep

Poor eating habits (over or underfeeding)

Special disability in reading

“ “ “ language

“ “ “ number

Speech defects

Defects of special senses

Defects of nose or throat

Racial stock (note racial groups contributing most largely to failure)

*In Home*

Use of foreign language

Indifference of parents

Poverty

Lack of parental harmony

Broken homes

Unwise treatment of child

*In School*

Poor teaching

Large classes

Lack of adequate equipment

Lack of homogeneity of instruction groups

Course of study

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